THE ARCHITECTURAL RECORD

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ARTICLES PAGE

Cranbrook School, Bloomfield Hills, Michigan
Eliel Saarinen, Architect 453

The Reinhardt Theatre, New York
Joseph Urban, Architect
By Shepard Vogelgesang 461

Architects and Their Offices
II. Carl Jules Weyl, Los Angeles 466

Oak Hill, Bethayres, Pennsylvania
By Costen Fitz-Gibbon 469

In the Cause of Architecture
IX. The Terms
By Frank Lloyd Wright 507

Italian Stonework. Part III.
By Myron Bement Smith 515

PLATES

Entrance to Study Hall, Cranbrook School
Frontispiece

Views of Cranbrook School, Bloomfield Hills, Michigan
Eliel Saarinen, Architect 475-506

ALLIED ARTS AND CRAFTSMANSHIP

Details, Cranbrook School, Bloomfield Hills, Michigan
Eliel Saarinen, Architect
Geza Maroti, Sculptor 525-528

NOTES AND COMMENTS PAGE

Design Patents for Buildings
By Joseph Rossman 529

Destruction
By Henry-Russell Hitchcock, Jr. 530

New Lamps for Old 531

THE ARCHITECT'S LIBRARY

Houses of the Wren and Early Georgian Periods.—*Trunstan Small and Christopher Woodbridge*
Review by Arthur W. Colton 532

Hotel Planning and Outfitting.—*C. Stanley Taylor and Vincent R. Bliss, Eds.*
Reviewed 533

Architecture.—*A. L. N. Russell*
Review by Edwin Avery Park 534

The Life Work of an English Landscape Architect.—*Autobiography of Thomas A. Mawson*
Reviewed 534

List of New Books on Architecture and the Allied Arts
Pauline V. Fullerton 535

Foreign Periodicals
Reviewed by Henry-Russell Hitchcock, Jr. 537

Index to The Architectural Record, Semi-Annual 540-546

For Index to Announcements, see Page 124 of Advertising Section.

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★But the Law Can Be Changed—

(*The Story of Negative Capillarity*)

THE natural law which makes concrete subject to attack and eventual disintegration by moisture can be changed to a law protecting concrete. Under the force of positive capillarity, water is drawn into any small pore or cavity in any material whatsoever. Concrete, being filled with countless tiny capillaries, is subject to this law.

Now, if you will take a fine glass tube and coat the inner wall with oil or any substance which will prevent the water from wetting the surface and then place the tube in a glass of water, you will find that the water level in the tube will not rise to the level of the water in the glass. The water resistant character of the coating changes the law of positive capillarity to negative capillarity. Water is repelled instead of attracted.

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★ *This is No. 8 of a series of non-technical explanations prepared by R. A. Plumb, General Director of The Truscon Laboratories, on the necessity for integrally waterproofing all concrete used in building.*

R. A. Plumb

General Director of
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ARCHITECTS' ANNOUNCEMENTS

HUNTER D. SCOTT, architect, announces the opening of offices for the practice of architecture in the French Building, Albuquerque, N. M. Manufacturers' samples are requested.

THE ARCHITECTURAL DEPARTMENT of Home Smith and Company has opened its new offices in the Administration Building, Home Smith and Company, Lambton Mills Post Office, Ontario, Canada. Manufacturers' samples are requested.

S. C. BLOOM and CHARLES F. KAMRATH announce the forming of Bloom and Kamrath, offices in the Monadnock Block, 330 South Dearborn Street, Chicago, Ill. The firm will specialize in the fields of air conditioning and refrigeration.

KENNETH F. JONES announces the opening of an office at 910 Kahl Building, Davenport, Iowa, for the professional practice of Landscape Architecture and Town Planning.

ARCHER AND GLOYD, architects, announce the association of Joseph W. Radolinsky, formerly with Thomas W. Lamb, New York, and the formation of Archer and Gloyd, Inc. Offices are at 916 Pioneer Trust Building, 1016 Baltimore Avenue, Kansas City, Mo.

THE OFFICE of Harold L. Young, Inc., architects, has been moved to 140 West 42nd Street, New York City. They will be pleased to interview any representatives of the building trades between the hours of 10 and 12 o'clock in the morning daily. Current samples from the building trades are also requested.

WARREN KNIGHT & DAVIS, architects, have moved from Room 1603, Empire Building, to the seventh floor of the Protective Life Building, Birmingham, Ala.

J. F. SURMANN, architect, has moved from Room 1315 to Room 920, Comer Building, Birmingham, Ala.

MARSHALL S. WELLS has opened an office to practice architecture in the City Finance Building, Charlottesville, Va.

ANNOUNCEMENT is made of the partnership of Samuel E. Hillger, A. I. A., and Wallace P. Beardsley, architect and engineer, for the general practice of architecture. Offices: Seward Block, Auburn, N. Y.

FRED G. ROUNDS, A. I. A., announces the opening of his offices for the general practice of architecture in the Advocate Building, Chehalis, Wash. He desires to receive manufacturers' samples.

WM. H. GOMPERT, architect, announces an association, for the resumption of his private practice of architecture, with the firm of Kenneth M. Murchison, architects, Architects Building, 101 Park Avenue, New York City.

WM. H. REID, architect, announces his removal from 820 McKinley Avenue to 809 Mary Street, Ann Arbor, Mich.

W. W. BEACH, architect, has moved from Chicago to Los Angeles. His new address is 2690 Beachwood Drive, Los Angeles, Calif.

ALFRED H. ECCLES, architect and engineer, announces the removal of his office to the Chatham-Phenix Building, Queens Plaza, Long Island City, N. Y.

CHAPMAN & OXLEY, architects, announce the removal of their offices from 1608 Northern Ontario Building, and 73 Adelaide Street West, to larger premises at 372 Bay Street, Toronto 2, Canada.

MELVIN PRATT SPALDING announces the removal of his offices to Architects Building, 101 Park Avenue, New York City.

C. F. SPRINGALL announces the removal of his architectural offices to larger quarters at 50 Park Street, corner of Spring Street, Malden, Mass.

WILLIAM DEWEY FOSTER, architect, announces the removal of his office to 25 West 45th Street, New York City.

JOHN W. HERTHEL, architect, announces the removal of his office from the De Menil Building, 119 N. 7th Street, to Artcraft Shop Building, 1525 Olive Street, St. Louis, Mo.

HENRY R. BOAK, architect, has changed his address from 110 Park Street to 131 E. 47th Street, New York City.

ALF. W. HERTZ, architect, is now located at 2121 Benton Boulevard, Kansas City, Mo. Former address: 4225 Locust Street in that city.

ROBERT R. YOUNG, draftsman and designer, is now located at the University Club, Akron, Ohio. Former address: 128 Sprague Avenue, Bellevue, Pa.

PAUL BENNETT, architect, has changed his address from 1126 North Avenue to 1926 North Avenue, Milwaukee, Wis.

WM. W. STICKNEY, architect, has moved to 5051 Van Nuys Boulevard, Van Nuys, Calif., from 738 Thatcher Building, Pueblo, Colo.

LINCOLN NORCOTT HALL, A. I. A., architect, has changed his address from 7 West Madison Street to 5107 Blackstone Avenue, Chicago, Ill.

CHANGE of address is announced by Harry M. Griffin, architect, from 512½ Main Street to 309 North Grandview Avenue, Daytona Beach, Fla.

H. ROY KELLEY, architect, advises of the removal of his offices from 53 West Colorado Street, Pasadena, to suite 1102, Architects' Building, Los Angeles, Calif.

JOHN P. DE POL, JR., construction engineer and designer, has moved to 191 Spring Street, Passaic, N. J., from 150 River Road, Delawanna, N. J.

A CLEMCO DESK

A "CLEMCO" Emerson Suite in the private office of H. H. Hensley, W. B. Foshay Co., Minneapolis, Minn.

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p. 49

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ENTRANCE TO STUDY HALL

CRANBROOK SCHOOL, BLOOMFIELD HILLS, MICHIGAN

ELIEL SAARINEN, ARCHITECT

GEZA MAROTI, SCULPTOR

THE ARCHITECTURAL RECORD

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ARTS & CRAFTS

VOLUME 64 DECEMBER·1928 NUMBER 6

CRANBROOK SCHOOL, BLOOMFIELD HILLS, MICHIGAN

ELIEL SAARINEN, ARCHITECT

Cranbrook School at Bloomfield Hills, Michigan, is the first executed architectural work of Eliel Saarinen in America. It is in reality a fragment of a large school, whose ultimate scope will include an elaborate layout of buildings for academic and artistic training of boys.

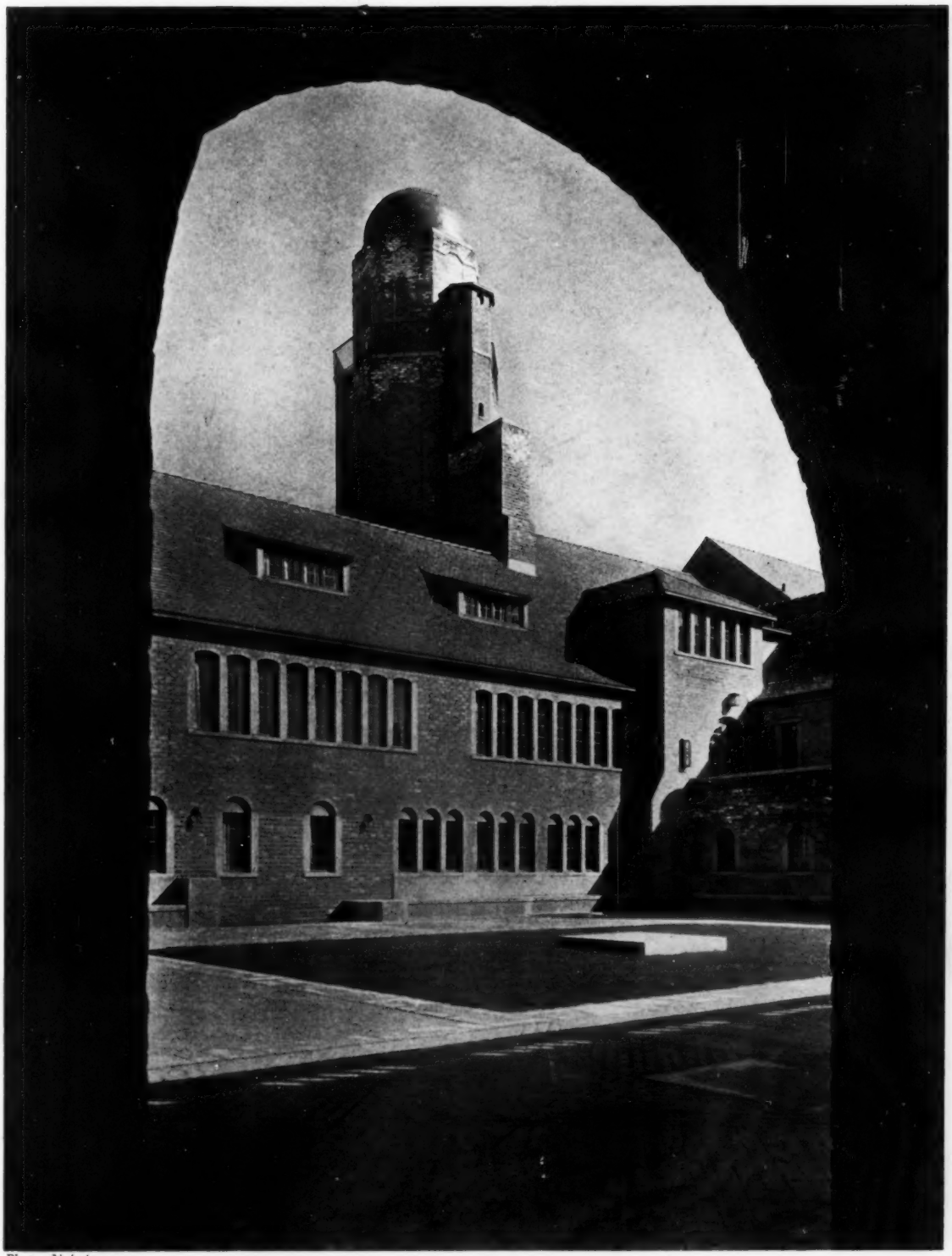
This school is notable in that the conventional collegiate plan was abandoned and preference given to a coherent grouping of buildings around courts. In design the work of Eliel Saarinen combines a technical facility with detail that is quite his own and produces a force and splendor that is more particularly associated with the contemporary work of Central Europe. The important place which the crafts occupy in the school buildings is of extreme interest for it is generally conceded that the inferiority of nineteenth century architecture is chiefly due to poor craftsmanship.

Coming to America from Helsingfors, Finland, following the Tribune Tower Competition in 1925, Mr. Saarinen participated in a project in collaboration with other architects of Chicago. While engaged upon a study for the Chicago "Loop" and Grant Park district, he was invited by Professor Emil Lorch to the chair of architecture at the University of Michigan as lecturer on design. Later he was employed by the Detroit Chapter of the American Institute of Architects to make a study of the River Front project, the plan and elevations of which were published in The Record, May, 1928. In 1926 he was engaged as architect of The Cranbrook School.

Mr. Saarinen, who has worked entirely in America in the last few years, gives promise of a revival of interest in the crafts, in which he scrupulously respects honesty of materials and workmanship. It may be hoped that his work at Cranbrook will strengthen and continue this influence and illustrate how far new style creation may be combined with and even grow out of the best craftsmanship. Already in a field hardly natural to him, the skyscraper, Saarinen's unexecuted project for the Chicago Tribune building has had a marked effect on American design. It is now possible to study his executed work produced here and under our conditions. From these examples may develop some such change in domestic and institutional design as is now so marked in the building of skyscrapers.

Photo, Nyholm

ENTRANCE (ABOVE) AND MODEL OF ENTIRE PLOT DEVELOPMENT
CRANBROOK SCHOOL, BLOOMFIELD HILLS, MICHIGAN
ELIEL SAARINEN, ARCHITECT



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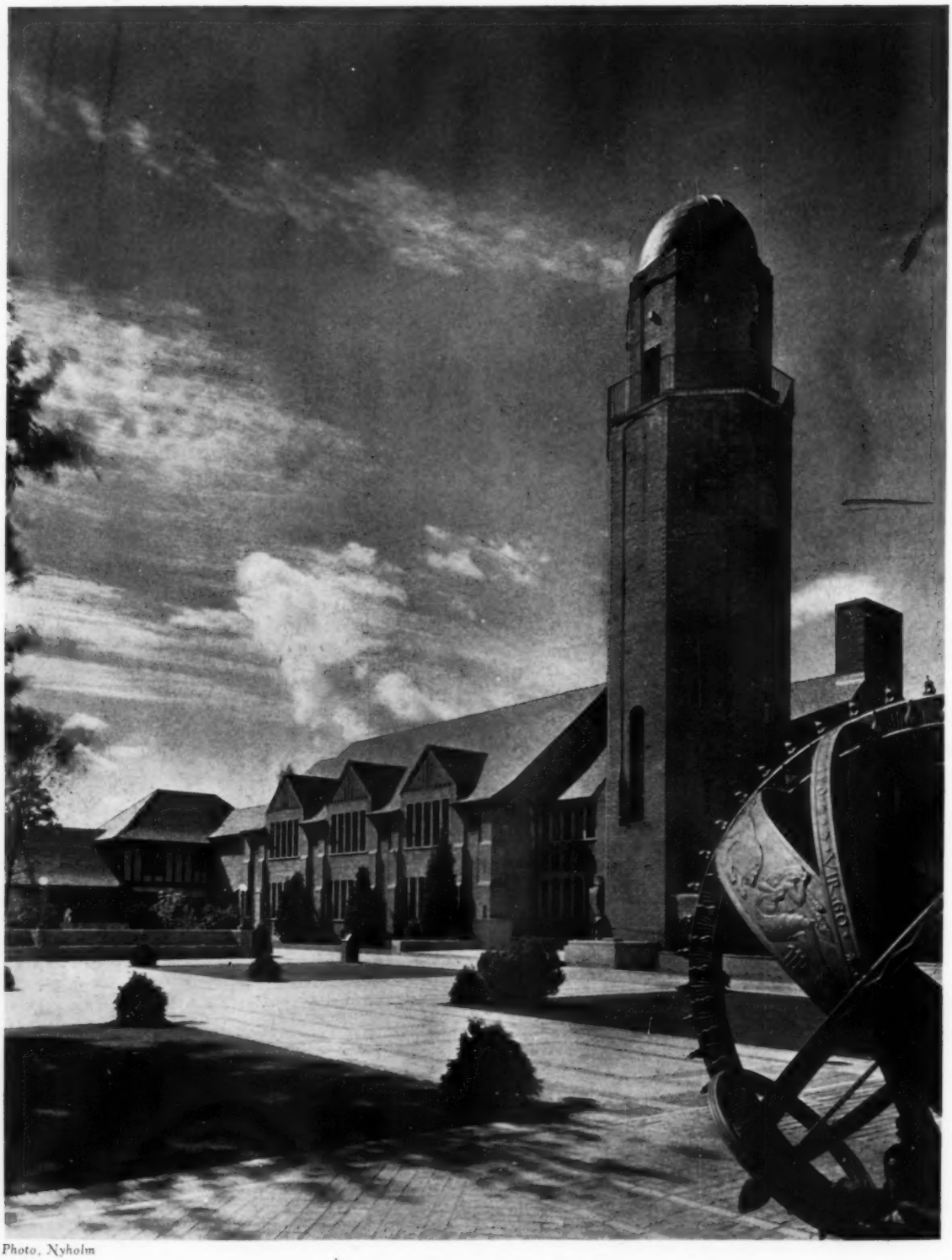
OBSERVATORY FROM REAR COURT

CRANBROOK SCHOOL, BLOOMFIELD HILLS, MICHIGAN

ELIEL SAARINEN, ARCHITECT



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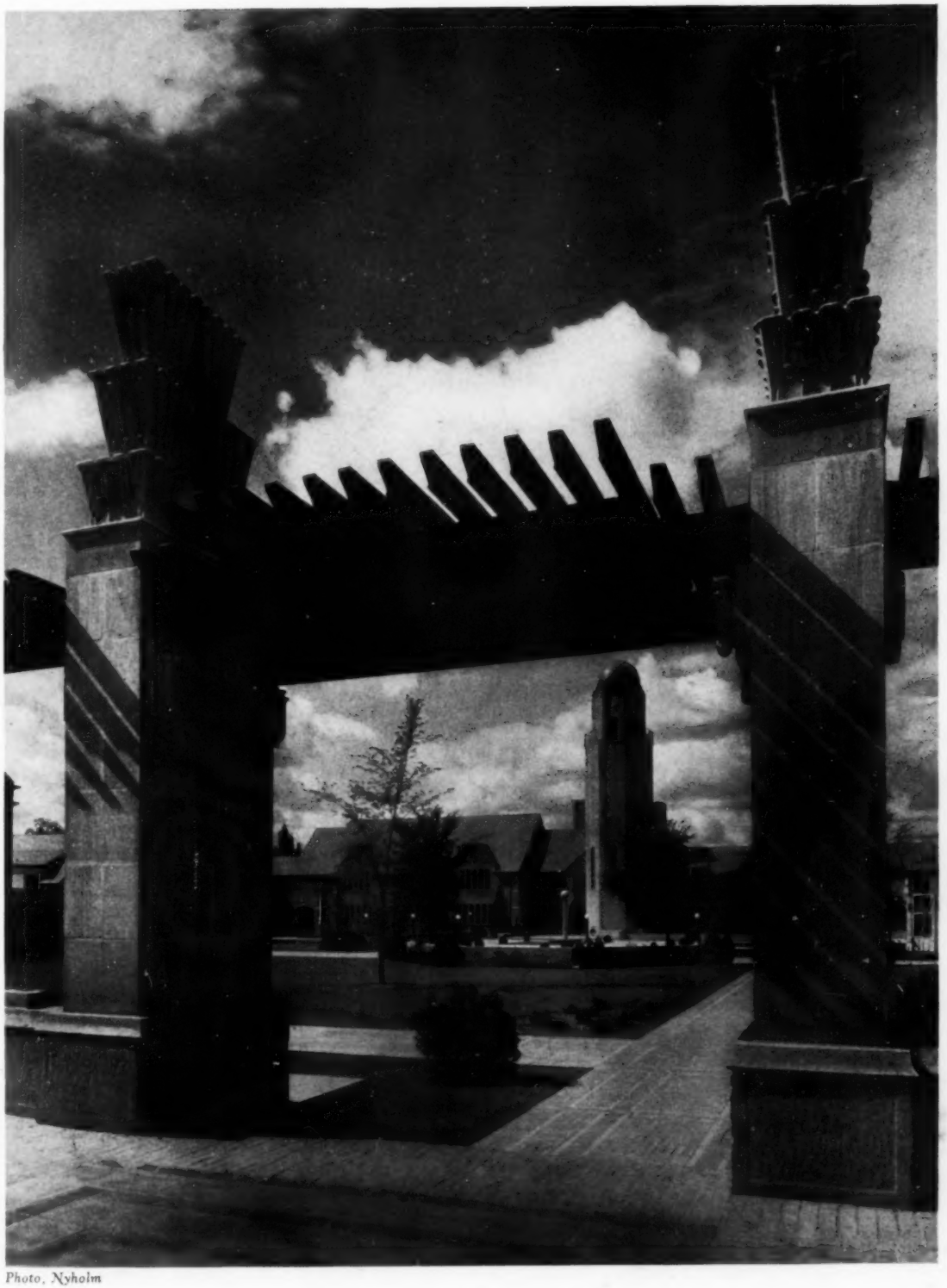
ACADEMIC BUILDING AND TOWER

CRANBROOK SCHOOL, BLOOMFIELD HILLS, MICHIGAN

ELIEL SAARINEN, ARCHITECT



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GENERAL VIEW OF ACADEMIC BUILDING
CRANBROOK SCHOOL, BLOOMFIELD HILLS, MICHIGAN
ELIEL SAARINEN, ARCHITECT

GENERAL VIEW LOOKING FROM ACADEMIC BUILDING

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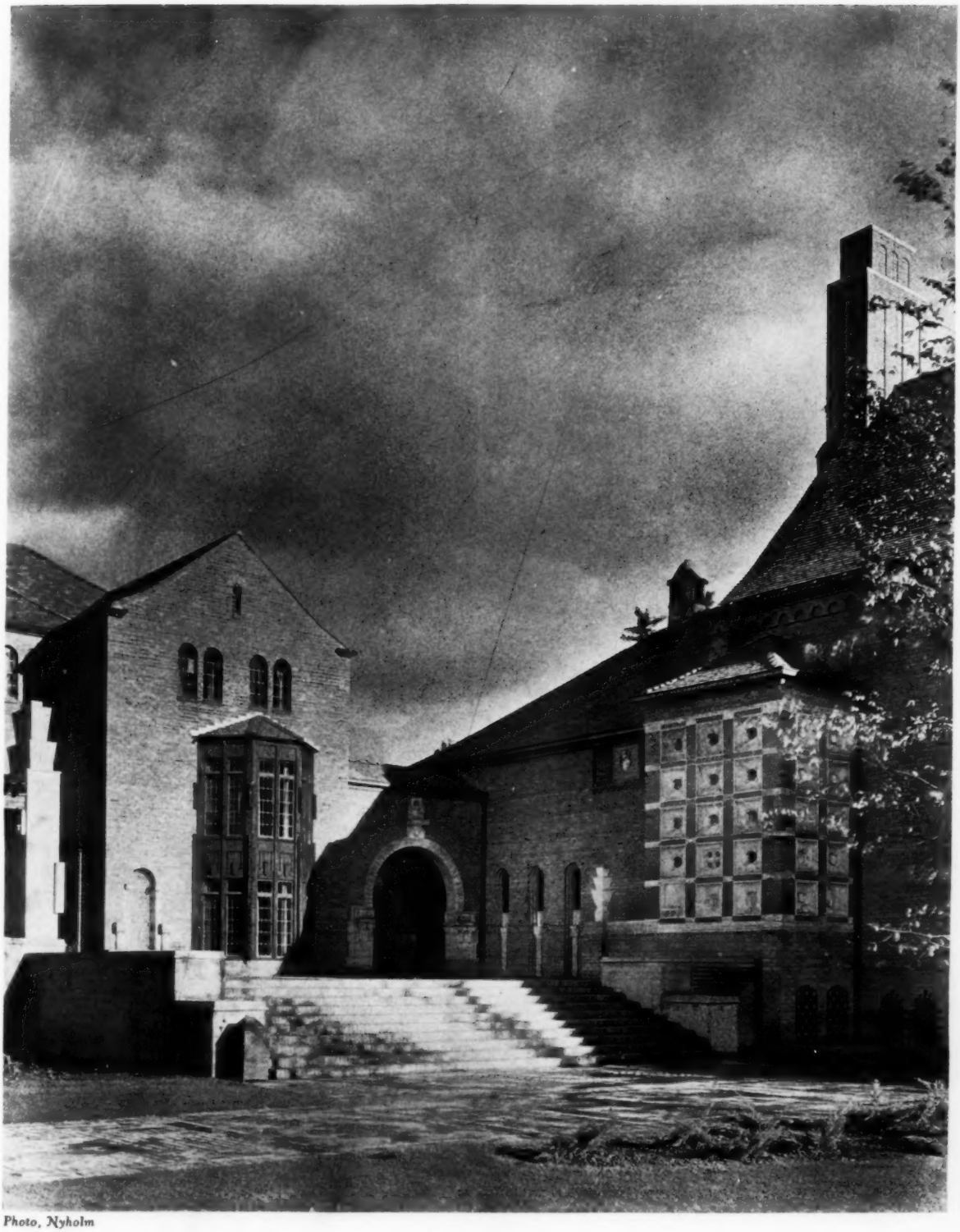
SIDE VIEW OF DINING HALL

CRANBROOK SCHOOL, BLOOMFIELD HILLS, MICHIGAN

ELIEL SAARINEN, ARCHITECT



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ANGLE OF COURT

CRANBROOK SCHOOL, BLOOMFIELD HILLS, MICHIGAN

ELIEL SAARINEN, ARCHITECT

Photo, Nyholm

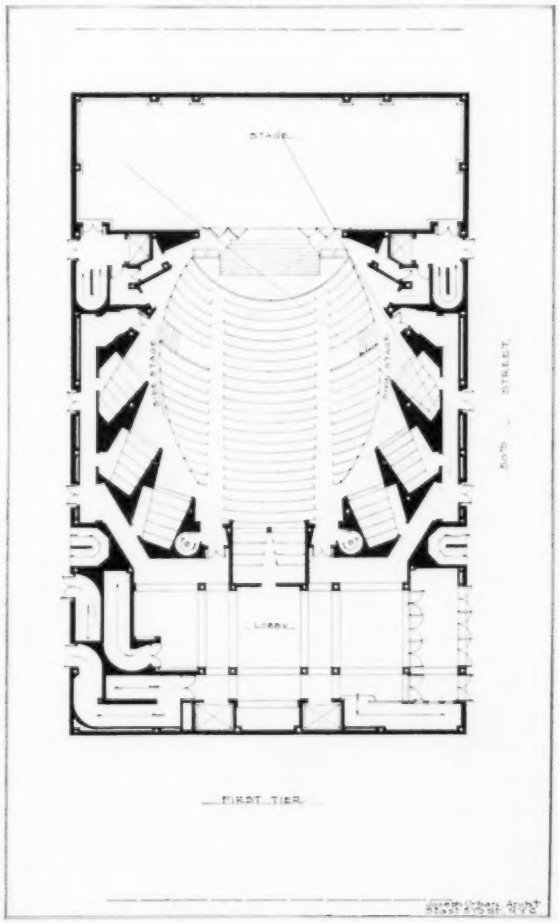
MAIN STAIR AND FIREPLACE IN ACADEMIC BUILDING
CRANBROOK SCHOOL, BLOOMFIELD HILLS, MICHIGAN
ELIEL SAARINEN, ARCHITECT

THE REINHARDT THEATRE, NEW YORK

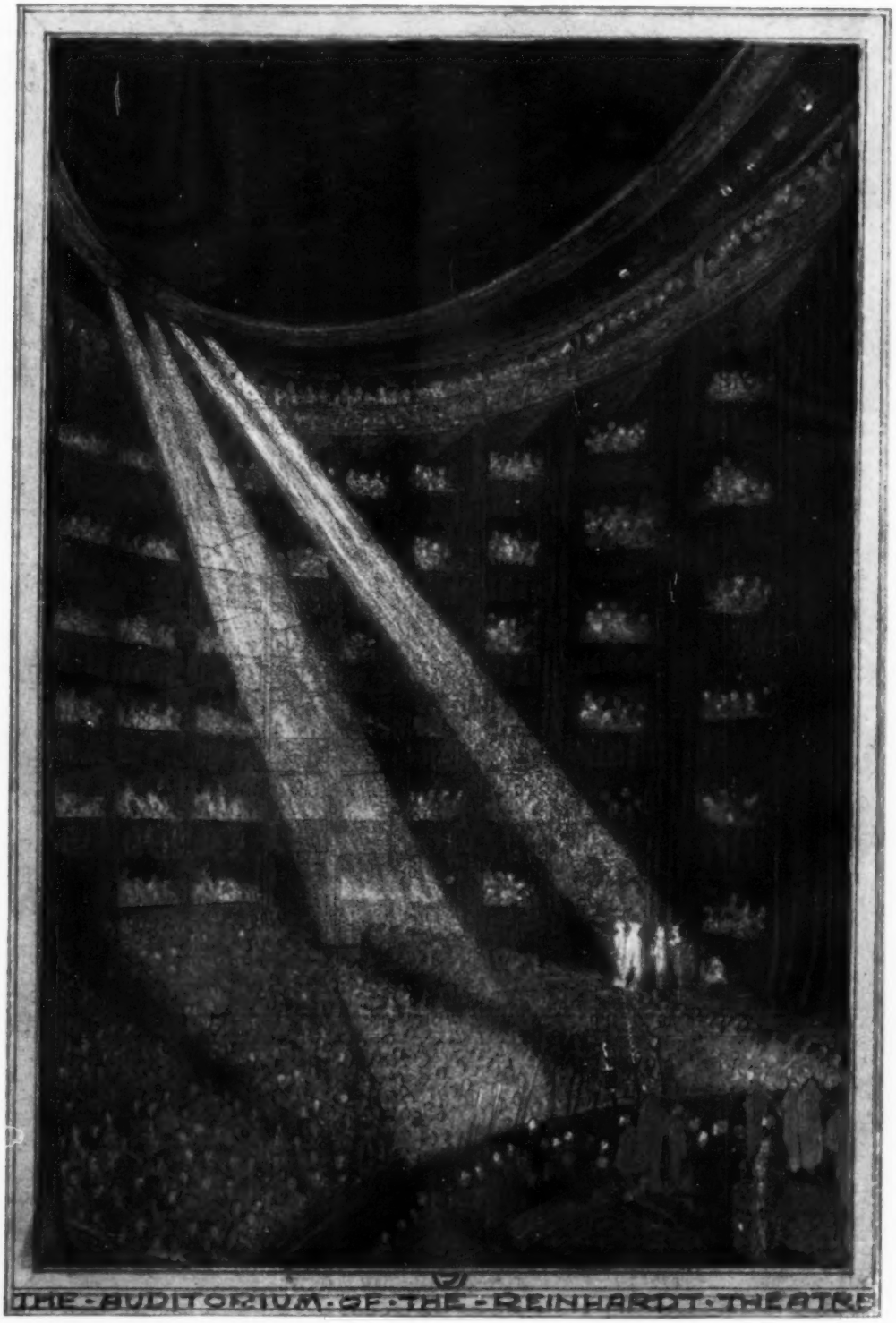
JOSEPH URBAN, ARCHITECT

BY SHEPARD VOGELGESANG

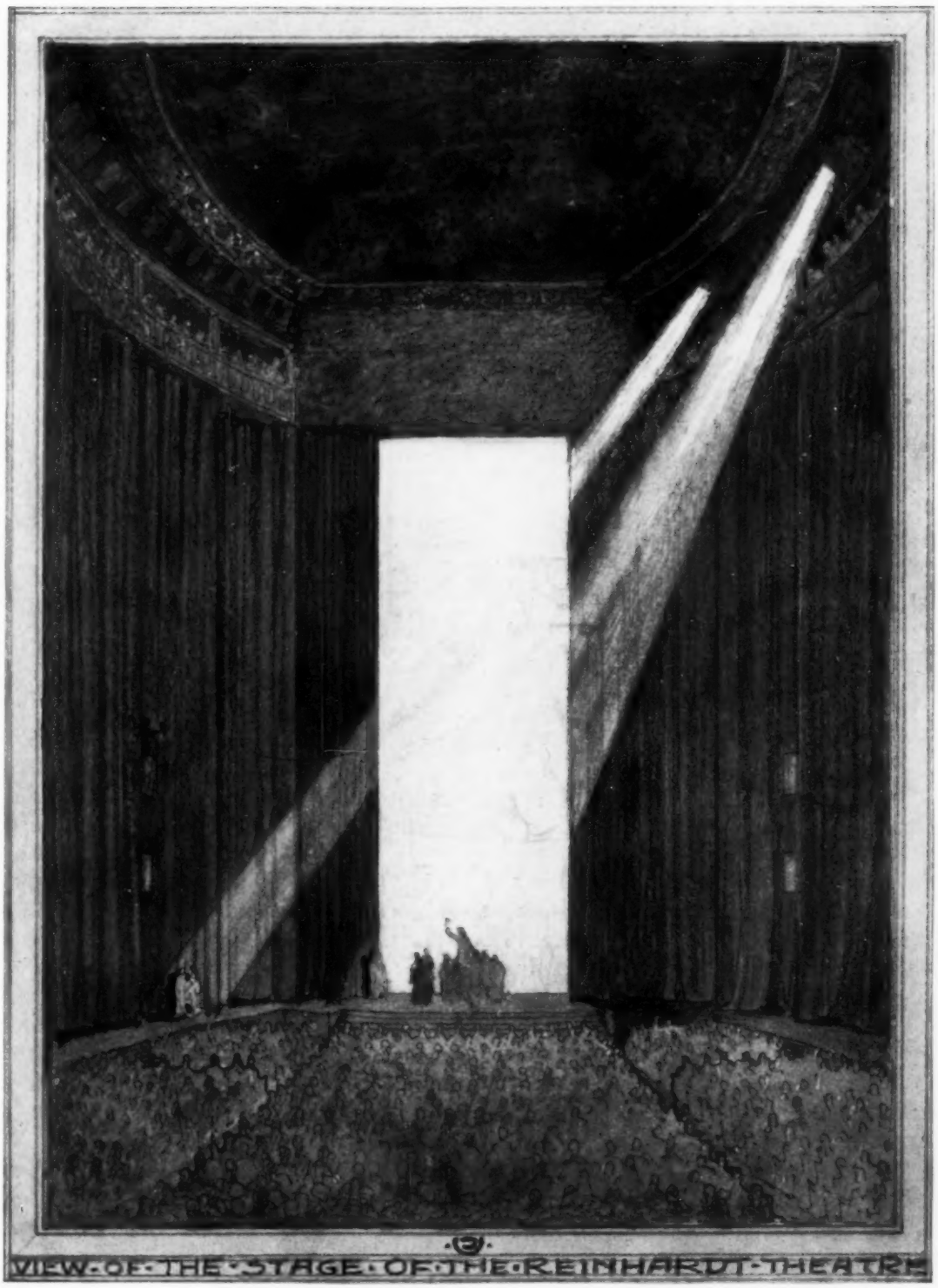
Only the stage as Max Reinhardt conceives it, only the theatre as Joseph Urban understands it, could result in a building of fully adequate dramatic potentiality. The stage for Reinhardt is the whole house; the theatre with Urban is a shell containing actor and audience. There is no question of a setting nor of an enframement for the actor; actor and audience are an emotional whole reacting upon each other in the same enclosed space. The two ideas, one of the stage being a part of the audience, the other of the building enclosing the actor and audience in one space, are both means toward the heightened emotion which is the substance of drama. The whole interior design of the theatre is conceived to this end, expresses this end with such directness and simplicity that an undertanding of the aim completes comprehension of the design.



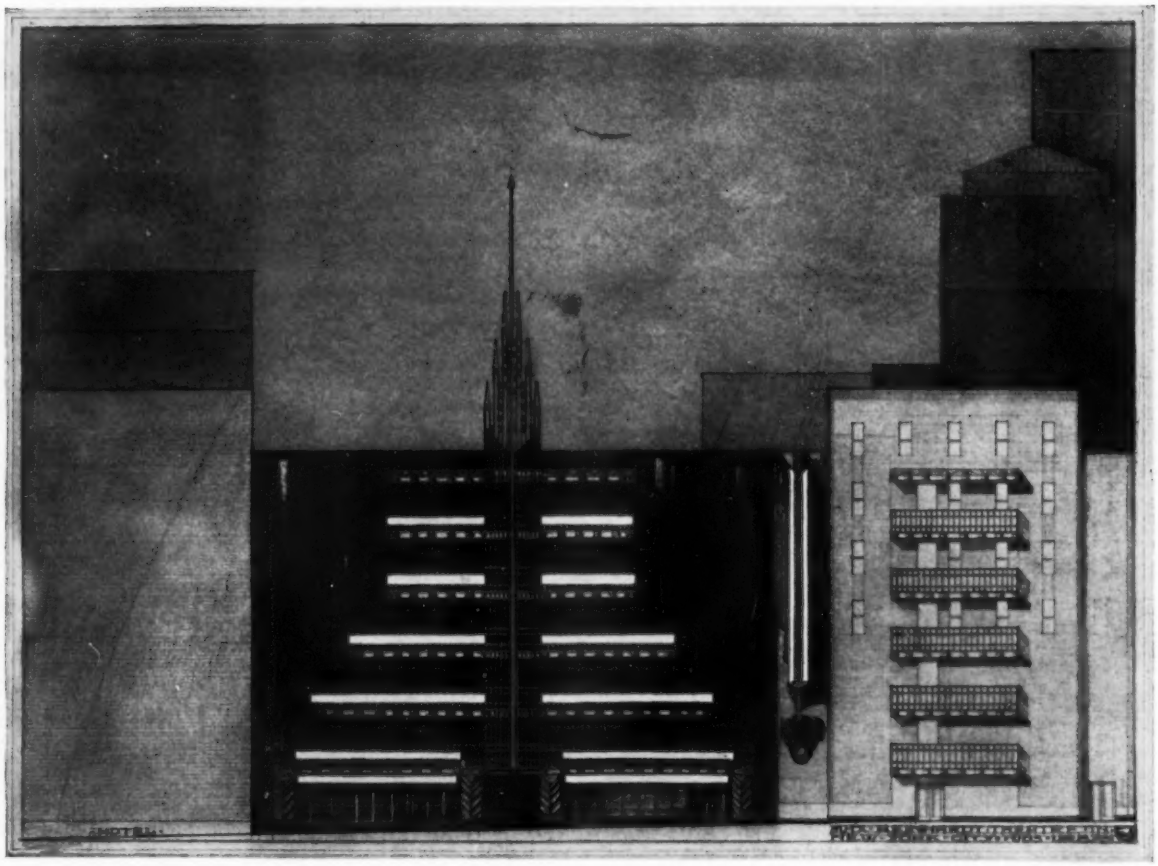
No curtain separates actor and audience. The audience, "a curtain of faces," is for the actors—it surrounds them with living reactions to the emotions they portray. For the audience there are only the actors among them, massing or scattering for a time before a shaft of light or against darkness in which a few objects give the time and place to the scene. In contrast to the social Baroque theatre from which most present day playhouses are descendant, the audience is largely invisible to itself. The theatre repeated thoughtlessly from a type designed for the flash of an eye and flutter of a fan does not here exist. So it is that the walls are screens slanted to the lines of sight and hung from top to floor in sheer falling drapery. This great curtain forms a deadener to echoes and, when the folding screens at the back-ground opening are narrowed or closed, maintains the unity of wall surface. In the blind portions behind the screens are steps which descend to the different levels of box seats. Each seat has a line of sight far into the depth and width of the proscenium opening. The oval shape of the theatre was determined by the lines of sight. The auditorium is small in spite of the elongated shape, only eighty feet deep—half the depth of the usual large theatre—so that the intimate relation of actor and audience is not strained. Above the six tiers of boxes runs a gallery for the actors as well as for gallery fans and special musicians. Unlike a concert



REINHARDT THEATRE, NEW YORK
JOSEPH URBAN, ARCHITECT



REINHARDT THEATRE, NEW YORK
JOSEPH URBAN, ARCHITECT



ENTRANCE FAÇADE
REINHARDT THEATRE, NEW YORK
JOSEPH URBAN, ARCHITECT

where the performance of the orchestra is of interest, music in the theatre is at its best unseen. Should music before the proscenium be needed, the steps from floor to parterre disappear and an orchestra pit is in readiness. Above the gallery beneath the painted ceiling is a light ring from which spots can be thrown on an actor in any part of the theatre. Actors may enter from the sides of the auditorium or from the rear, may speak from the gallery or from the pit; music may fill the air unseen; a finger of light may wander over the house or a blaze of forty-seven spots fill the stage and auditorium with confusion. Always the actor is in the presence of his audience—the audience in undivided concentration on the actor—such is the machinery of drama in a house where mechanical equipment becomes a minimum. There are: a high scenery loft with its appliances, the machinery to lower the steps from stage to parterre into the pit before the stage and the light ring about the auditorium and light bridge above the stage. Of this equipment, the lights play the major part in the dramatic effect.

The stage and actors' dressing rooms are simple in arrangement. If used, the cyclorama will be portable. The wings are only three box tiers high. Above them are the dressing rooms, two to a side, four tiers high, sixteen in number, actresses on one side of the loft, actors on the other. Toilets are on both sides, one at each tier and an elevator and staircase serves each side. The rehearsal room is over the auditorium sur-

rounded by the spotlight room and connecting with the top tier of dressing rooms. It repeats roughly the character of the lower auditorium and stage—a high platform with steps down to what, in the auditorium beneath it, is parquet.

The public foyer lies across the back of the auditorium and is entered from the street on the long axis. Each tier has its own foyer with services and offices facing the Fiftieth Street frontage. There are two elevators besides the staircases and fire towers. The layer distribution of audience during intermission emphasizes the inappropriateness of this building to "social theatre." The arrangement is in direct contrast to the European theatre and opera promenades, which, however, were never much used in this country until the moving picture houses laid claim to court atmosphere. The foyer and circulation space provided here by the architect is ample without being lavish. The auditorium alone is monumental.

The function of the exterior is twofold: to incorporate the necessary fire escapes and to display the necessary advertising. The fire escape will carry the signs. A long billboard at right angles to the façade is calculated to carry the necessary publicity to visibility from the ends of the street. Black glass veneering on the building serves as a logical and handsome background to the grille of signs and galleries. The recognition given the problem of decent and adequate theatre publicity combined with the troublesome fire laws is solved at one stroke and a notable façade produced. The exuberance of the fire tower perhaps is debatable. Such questions are a matter of taste. The important consideration is that a difficult problem has been solved in a clear-cut, purposeful manner. To object that the Fiftieth Street front is only a façade is to object to the nature of New York lots. In Europe where a theatre stands in an open place something may be done with the massing of the building. In New York there is room for only one face, usually employed for publicity.

Max Reinhardt has five theatres in Germany and Austria. Three of them were built or extensively remodeled to allow an exercise of his theatre technique. The three are: the "Grosses Schauspielhaus" in Berlin, the "Theater in der Redoutensaal" in the Vienna Hofburgh and the "Festspielhaus" in Salzburg. The Grosses Schauspielhaus was remodeled from a circus by Hanz Poelzig to a theatre of the Greek type of plan: seating encircling an orchestra with a stage at the back. The Salzburg Festspielhaus by Clemens Holzmeister is long like a concert hall—the gallery runs into the stage; there is no proscenium arch. There are, in fact, no important similarities between Mr. Urban's design and European theatres built under the modern theatre movement. The accessibility of the auditorium to the actors is approached by the Grosses Schauspielhaus in Berlin but the method is there limited to a circle in the centre of the audience. The practicability of screens as a background, the physical presence of actor and spectator in the same space were properties of the Theater in der Redoutensaal. The boxes and gallery of the Theater in der Josefstadt are present in the Reinhardt Theatre, done, however, from a new standpoint and for amplified uses, and only the same feeling of intimacy unites the smaller Josefstadt theatre with Urban's larger and more broadly treated building. The coincidence of a producer with a really formative will finding an architect of ready sympathy and the creative power to give suitable expression to these ideas and this sympathy is extremely happy. It is to be hoped that such ideas in this country will be realized.

ARCHITECTS AND THEIR OFFICES

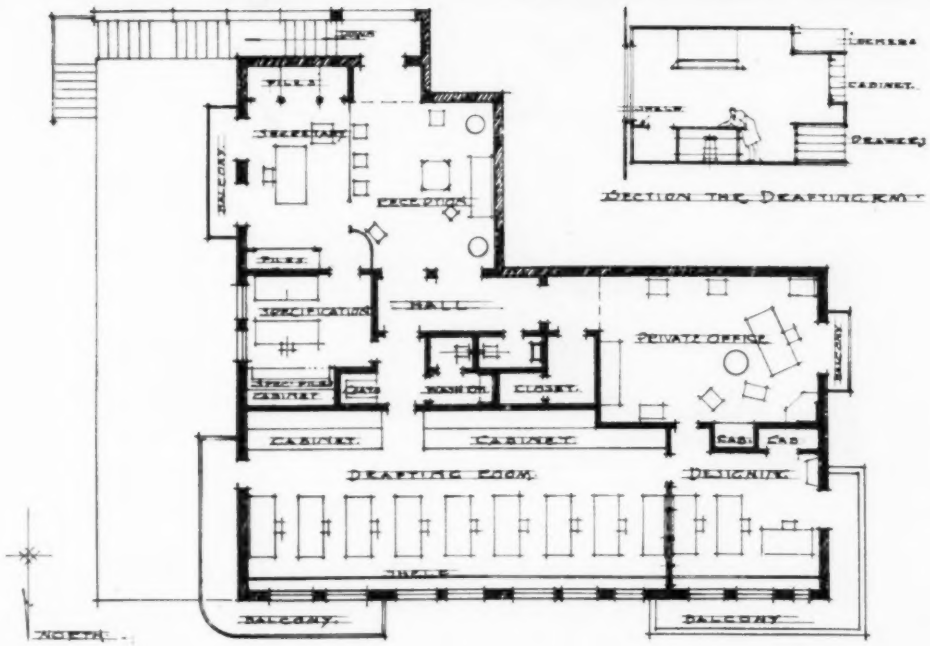
II. CARL JULES WEYL, LOS ANGELES

THE OFFICE layout of the architect, Carl Jules Weyl of Los Angeles, is arranged in such a way that there is direct communication from the private office of the architect to designing room and to drafting room. There is also convenient access to specification and contractors' room and to the desk of the secretary.

The location of the designing room and the drafting room is ideal with the northern exposure giving them the most desirable light. These rooms are but 16′-0″ wide which allows only one drafting table of 3′-6″ wide and 6′-0″ long. There is a trough along the entire length of the drafting room at table height for drafting tools and accessories, enabling the draftsmen to use their tables only for their drawings and thus keeping them clean. Between this shelf and the table is a distance of 2′-0″ to allow the men to walk around their table. Between the end of the table and the cabinets, which run the entire length of the drafting room, is a passage of 4′-0″, which allows the drawers to be pulled out and sufficient space to pass by. This cabinet is 4′-0″ deep and 3′-6″ high forming a counter which is used as a reference table. Above this cabinet is another cabinet 14″ deep against the wall, used for drafting room references such as catalogues, samples and books. Above this cabinet, next to the ceiling, is a continuous locker space used for filing finished work.

OFFICE OF CARL JULES WEYL, ARCHITECT, LOS ANGELES, CALIFORNIA

The general routine of the office is as follows: All the preliminary work and conferences are handled by the architect who has direct relations with the client. The architect does his own designing and most of the time his own rendering. From then preliminary working studies are prepared in the designing room. When these advanced sketches are approved by the client the work goes into the drafting room for further study and progresses to the actual working drawings. There is no chief draftsman, other than the architect, but one of the draftsmen is placed in charge of a job but with continued contact with the architect. This man in charge carries the job through, even into writing the specification and part supervision.



DRAFTING ROOM AND FLOOR PLAN
OFFICE OF CARL JULES WEYL, ARCHITECT, LOS ANGELES

DETAIL OF DRAFTING ROOM

ENTRANCE STAIRWAY

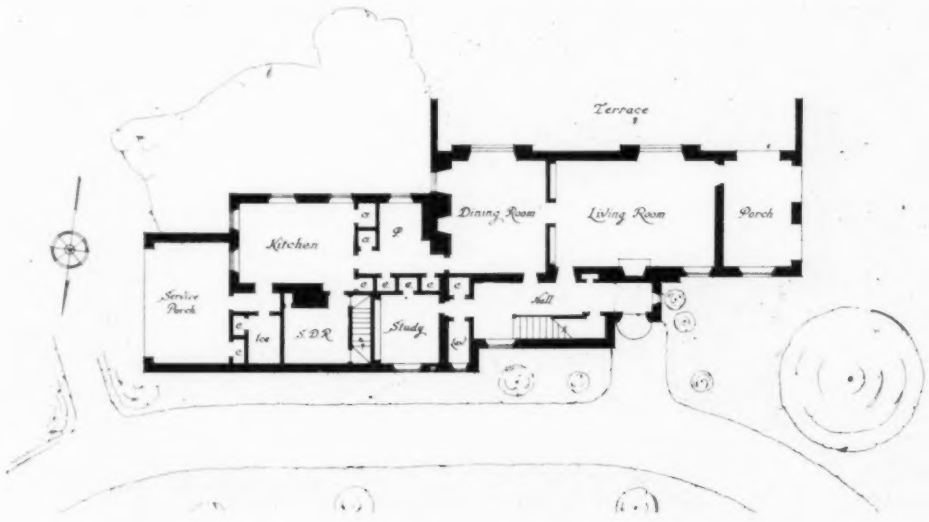
OFFICE OF CARL JULES WEYL, ARCHITECT, LOS ANGELES

OAK HILL, BETHAYRES, PENNSYLVANIA

BY COSTEN FITZ-GIBBON

Oak Hill, at Bethayres in the Huntingdon Valley, near Philadelphia, is a country house rebuilt from the ruins of a former house that had been destroyed by fire. The first house was a composite of early Georgian and the Pennsylvania Colonial farmhouse type. As was quite natural, in such a case, the plan of the main structure was approximately a square divided in the middle by the hallway. For the new house, the owner had decided preferences in the matter of both plan and style. He wished the house to be long so that the windows of nearly all the rooms would command the view over the valley to the south. The southern exposure was also desirable because the house was intended for occupancy throughout the year; in winter there would be the sunlight and warmth, in summer there was the prevailing breeze from the southwest to be gained. On the ground floor, a large living room to the west was one of the first things to be thought of, with easy access to the garden; next there was to be a good-sized dining-room, and there was also to be a small study for the master where he could be quite undisturbed by anything going on anywhere else in the house; some sort of covered open air place was hoped for but the customary tacked-on veranda was not looked upon with favor; beyond the dining-room, to the east, were to be the pantry, kitchen, larder and so on, and the entrance was to be on the north, as the old approach over the brow of the hill was from that direction.

In the matter of style, the owner wished the house to be low and sheltered, as far as might be, from the northwest blasts sweeping over the top of the hill in winter. He likewise admired the Cotswold manner of domestic building and wished to have his home moulded in the form of the Cotswold usage as nearly as conditions would permit. Cotswold domestic architecture, therefore,



FLOOR PLAN
OAK HILL, BETHAYRES, PENNSYLVANIA
LEIGH HILL FRENCH, JR., ARCHITECT; HAROLD D. EBERLEIN, ASSOCIATED

EAST END

OAK HILL, BETHAYRES, PENNSYLVANIA

LEIGH HILL FRENCH, JR., ARCHITECT; HAROLD D. EBERLEIN, ASSOCIATED

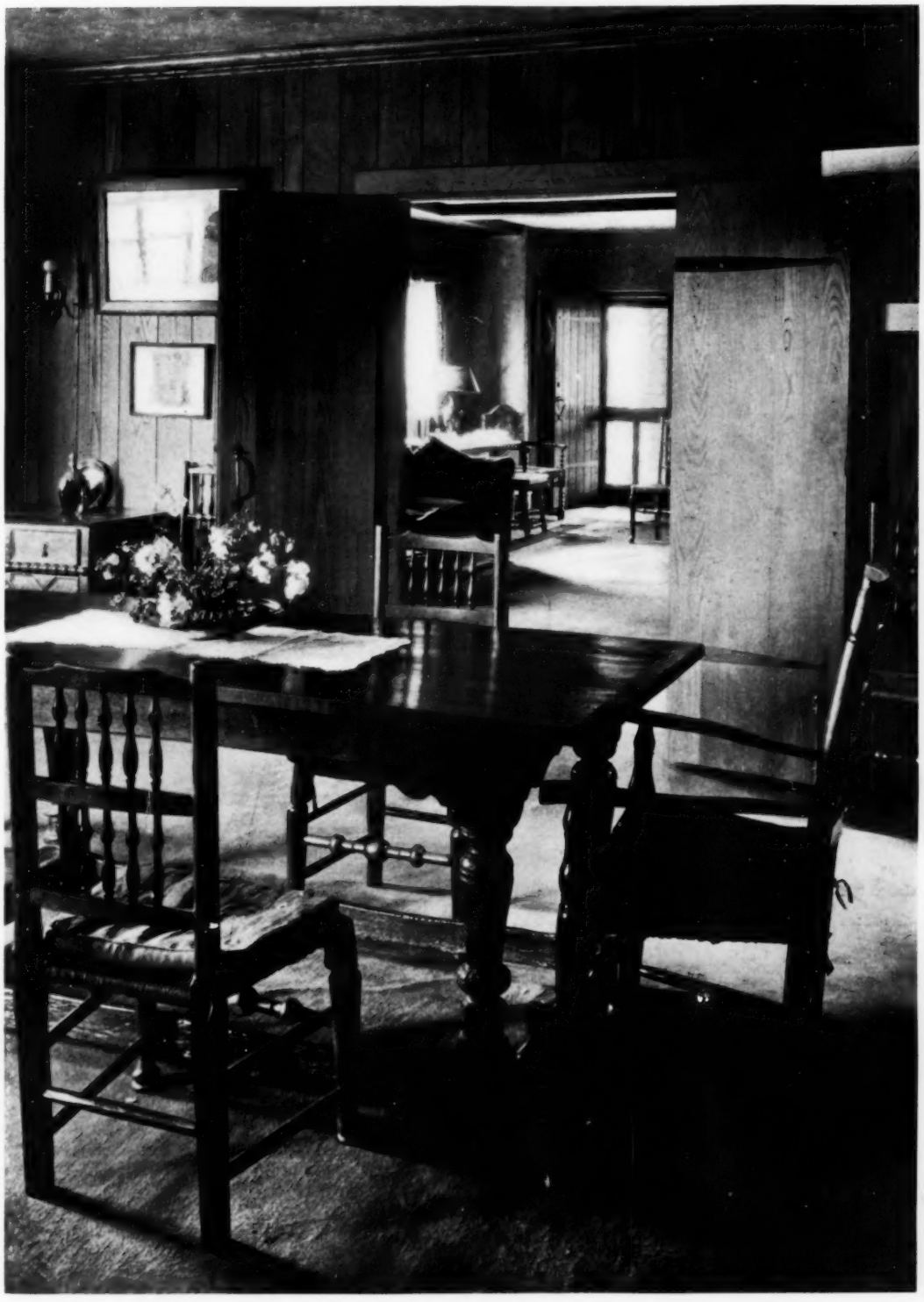
ENTRANCE DETAIL
OAK HILL, BETHAYRES, PENNSYLVANIA
LEIGH HILL FRENCH, JR., ARCHITECT; HAROLD D. EBERLEIN, ASSOCIATED

SOUTH FRONT

NORTH SIDE

OAK HILL, BETHAYRES, PENNSYLVANIA

LEIGH HILL FRENCH, JR., ARCHITECT; HAROLD D. EBERLEIN, ASSOCIATED



DINING ROOM
OAK HILL, BETHAYRES, PENNSYLVANIA
LEIGH HILL FRENCH, JR., ARCHITECT; HAROLD D. EBERLEIN, ASSOCIATED

was to supply the keynote for composition and the basis for adaptation.

Reproduction of any specific Cotswold prototype would have been out of the question, even had it been desirable. *Adaptation* was absolutely necessary, for there was the legacy of the sound parts of old walls and the main chimney from the former house to be dealt with and incorporated in the new structure, and these occurred in such places that it would have been utterly impossible to build exactly in the Cotswold manner. In the matter of depth alone, the old foundations and the remaining walls imposed a condition at variance with Cotswold custom, for Cotswold houses rarely have a depth of body greater than sixteen or eighteen feet, except where gables are carried out, bays introduced or some other device employed by which the roof area is increased at intersecting ridges; the roof span of a single gable is rather exceptional if it is more than sixteen to eighteen feet in a horizontal line.

Another limitation inherited from the earlier house occurred in the old stone lintels and dressed limestone sills, which it was felt ought to be used. The retention of these precluded the using of dressed stone mullions with leaded casements for the ranges of windows and made it advisable to have metal framed casements with rectangular glazing throughout, making the new work uniform with the old so far as the two items of lintels and sills were concerned.

Another departure from Cotswold tradition is to be seen in the material and quality of the masonry. There was no local supply of limestone resembling the universally used limestone of Cotswold architecture and it did not seem justifiable to fetch the material from a long distance when there was an abundant supply of excellent stone only a few miles away. Furthermore, this same grey Chestnut Hill stone had been used in the old walls, parts of which were to be retained in the new walls. The hard white cement pointing was chiseled out from the formerly existing masonry so that it would conform with the raked mortar joints of all the new part.

Neither was it practicable to get limestone roofing tile like those which impart such rare texture and color to the Cotswold roofs and materially contribute to the fascinating quality of Cotswold architecture in general. The nearest approximation to such roofing was gained by using heavy graduated slates laid with rounded valleys. Time and weather had to be depended upon to give the mellowness characteristic of old Cotswold houses. For that matter, however, even in the Cotswolds one must wait the mellowing of time unless one is fortunate enough to acquire at least a supply of old stone roofing tiles which, needless to say, are always at a premium.

The dining-room is paneled to the ceiling with ash. Elsewhere in the house the walls are of cream-colored irregularly surfaced plaster somewhat resembling the parged walls so often to be seen in the west of England. In the halls the floors are paved with red quarry tiles.

The Cotswold type of house is eminently comfortable and possesses a peculiarly agreeable domestic quality which strongly commends it to those who temperamentally find little satisfaction in the ordered precision of any of the Classic modes. Furthermore, it is readily adaptable to the requirements of American country life and sympathetic to translation into the local materials of many districts. As a matter of fact, it really has much in common with the old stone farmhouse type of the Middle States to which it is not very distantly related and in rolling country, especially, it seems to fall so naturally into place that it is sometimes difficult to realize that historically it is not part and parcel of the local heritage quite as much as the slightly simpler stone farmhouses from which it was not separated by a very great gap on the parent soil in England.

PORTFOLIO
OF
CURRENT ARCHITECTURE

Photo Nyholm

Study Hall
Cranbrook School, Bloomfield Hills, Michigan
ELIEL SAARINEN, ARCHITECT

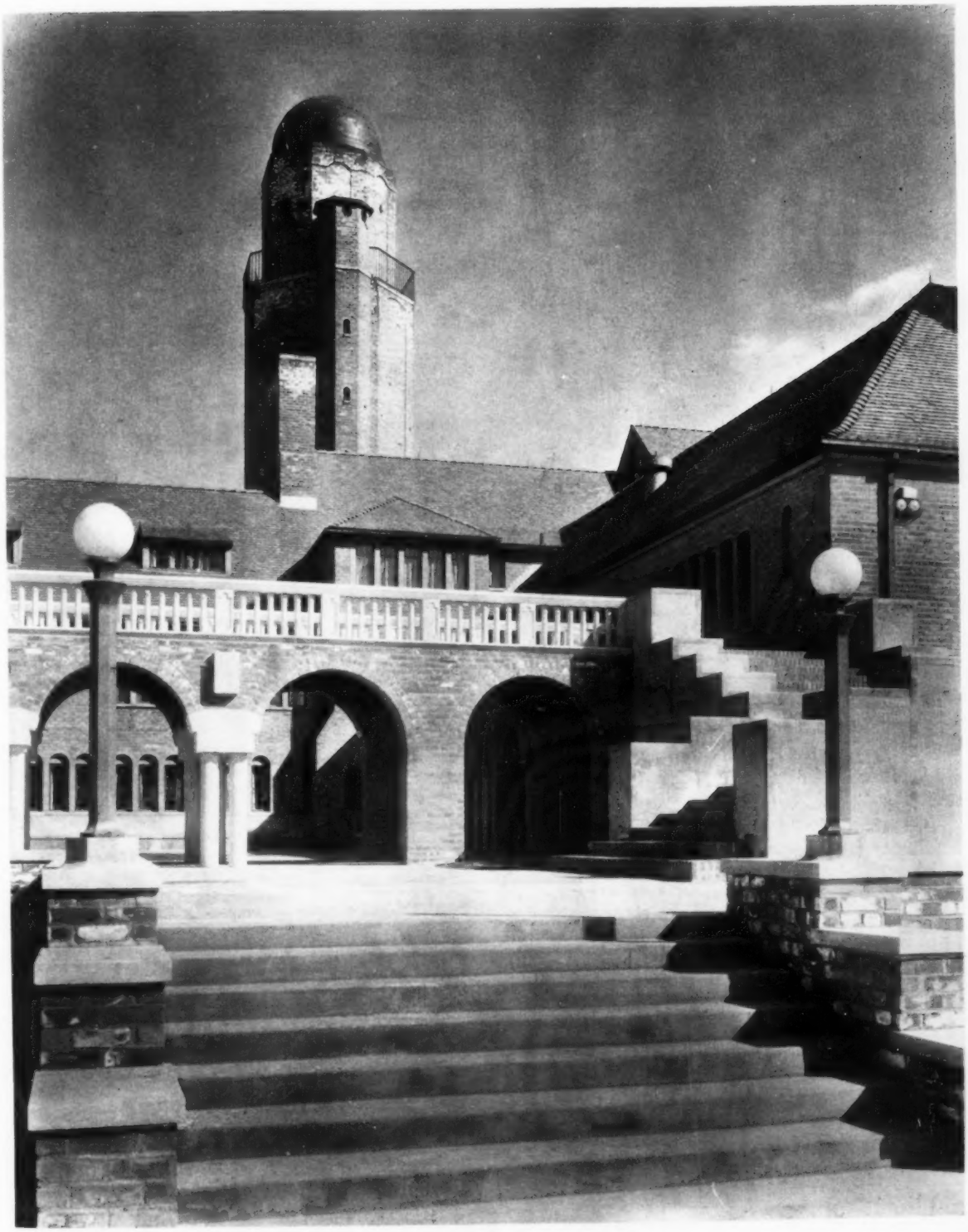


Photo Nyholm

View from Stadium
Cranbrook School, Bloomfield Hills, Michigan
ELIEL SAARINEN, ARCHITECT

Photo Nyholm

Fountain in Court
Cranbrook School, Bloomfield Hills, Michigan
ELIEL SAARINEN, ARCHITECT

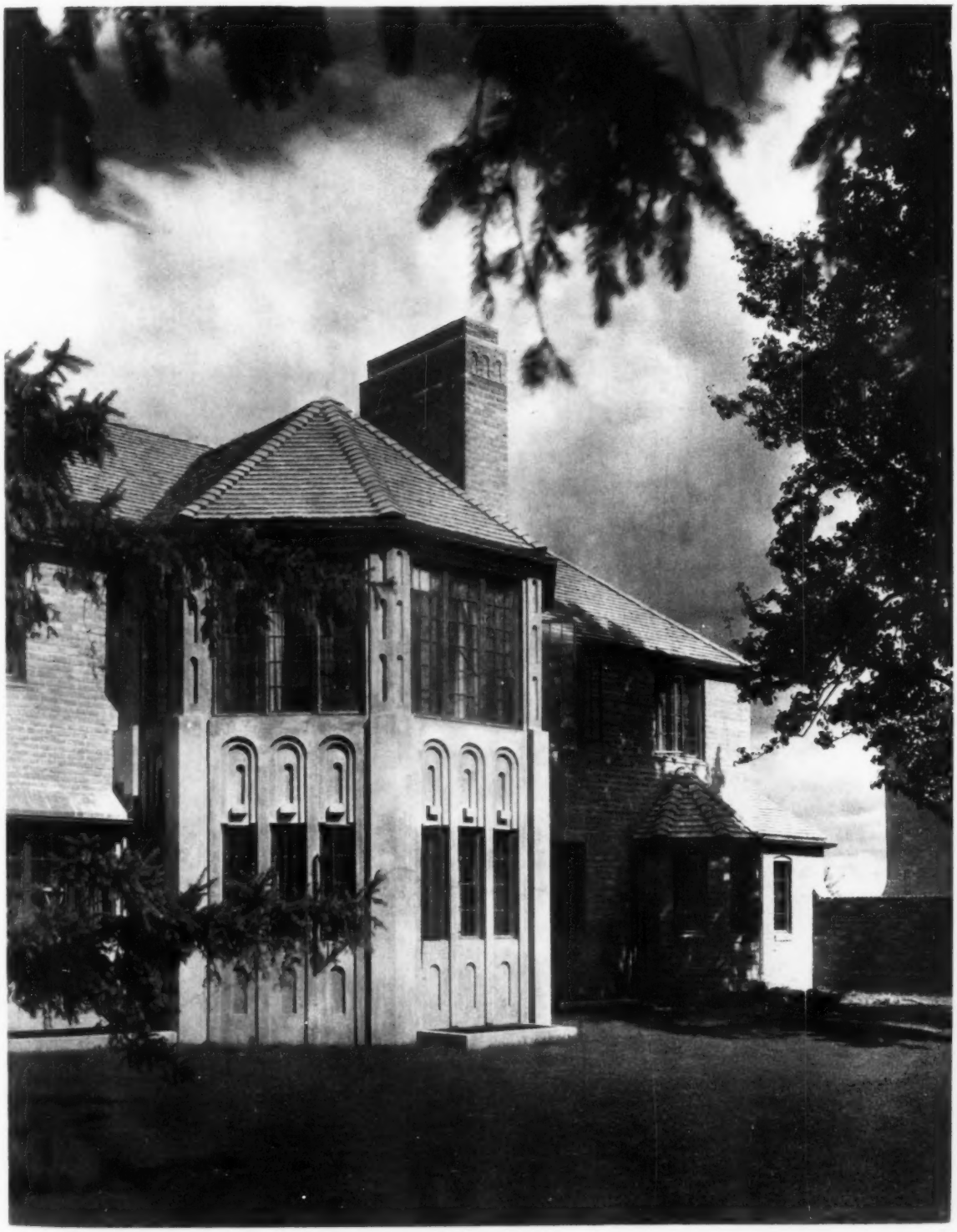


Photo Nyholm

Hospital Building
Cranbrook School, Bloomfield Hills, Michigan
ELIEL SAARINEN, ARCHITECT

Photo Nyholm

Entrance to Dormitory
Cranbrook School, Bloomfield Hills, Michigan
ELIEL SAARINEN, ARCHITECT

Photo Nyholm

Pergola Terminals
Cranbrook School, Bloomfield Hills, Michigan
ELIEL SAARINEN, ARCHITECT

Photo Nyholm

Entrance Detail
Cranbrook School, Bloomfield Hills, Michigan
ELIEL SAARINEN, ARCHITECT

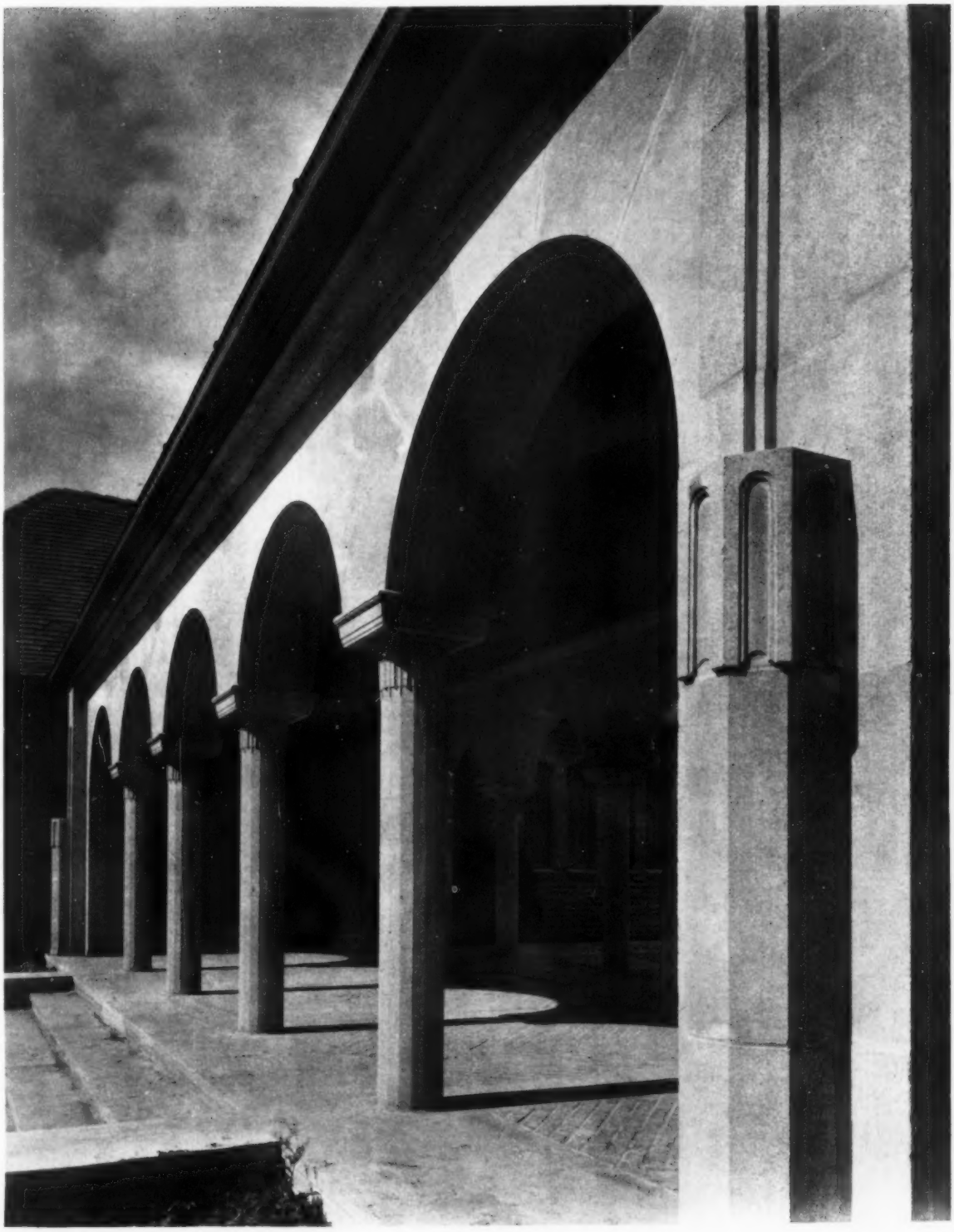


Photo Nyholm

Detail of Arcade
Cranbrook School, Bloomfield Hills, Michigan
ELIEL SAARINEN, ARCHITECT

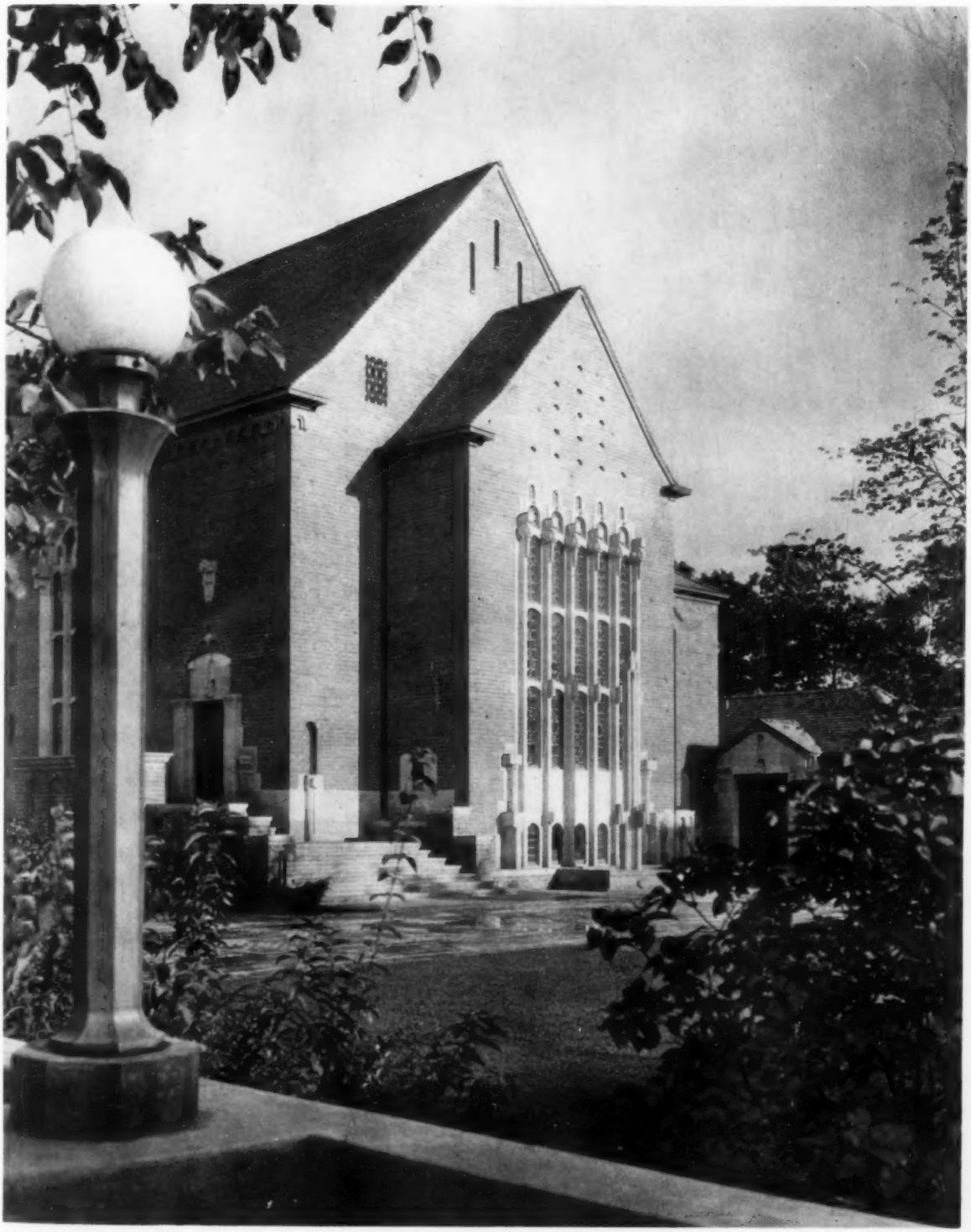


Photo Nyholm

Dining Hall
Cranbrook School, Bloomfield Hills, Michigan
ELIEL SAARINEN, ARCHITECT

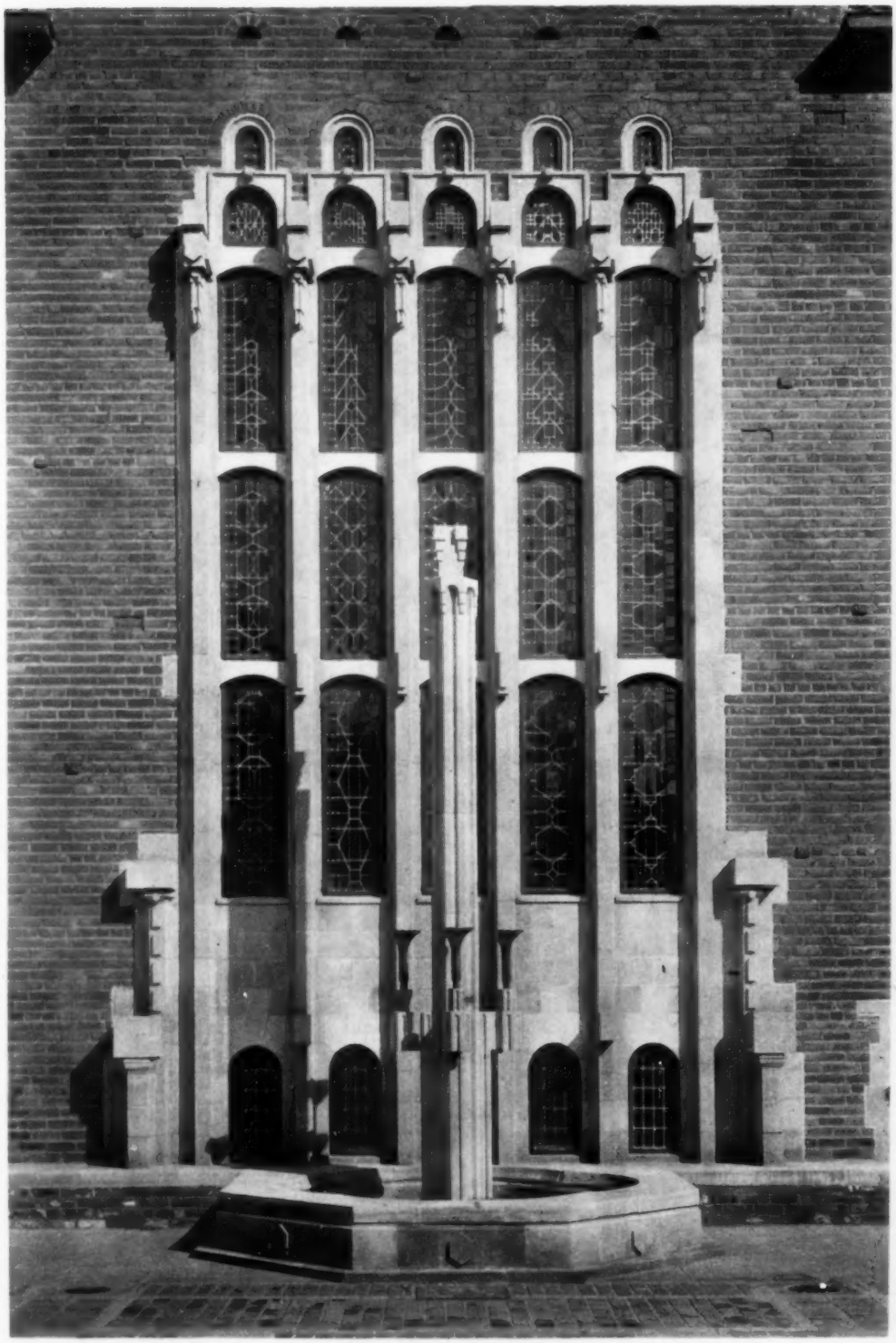


Photo Nyholm

Window in Dining Hall
Cranbrook School, Bloomfield Hills, Michigan
ELIEL SAARINEN, ARCHITECT

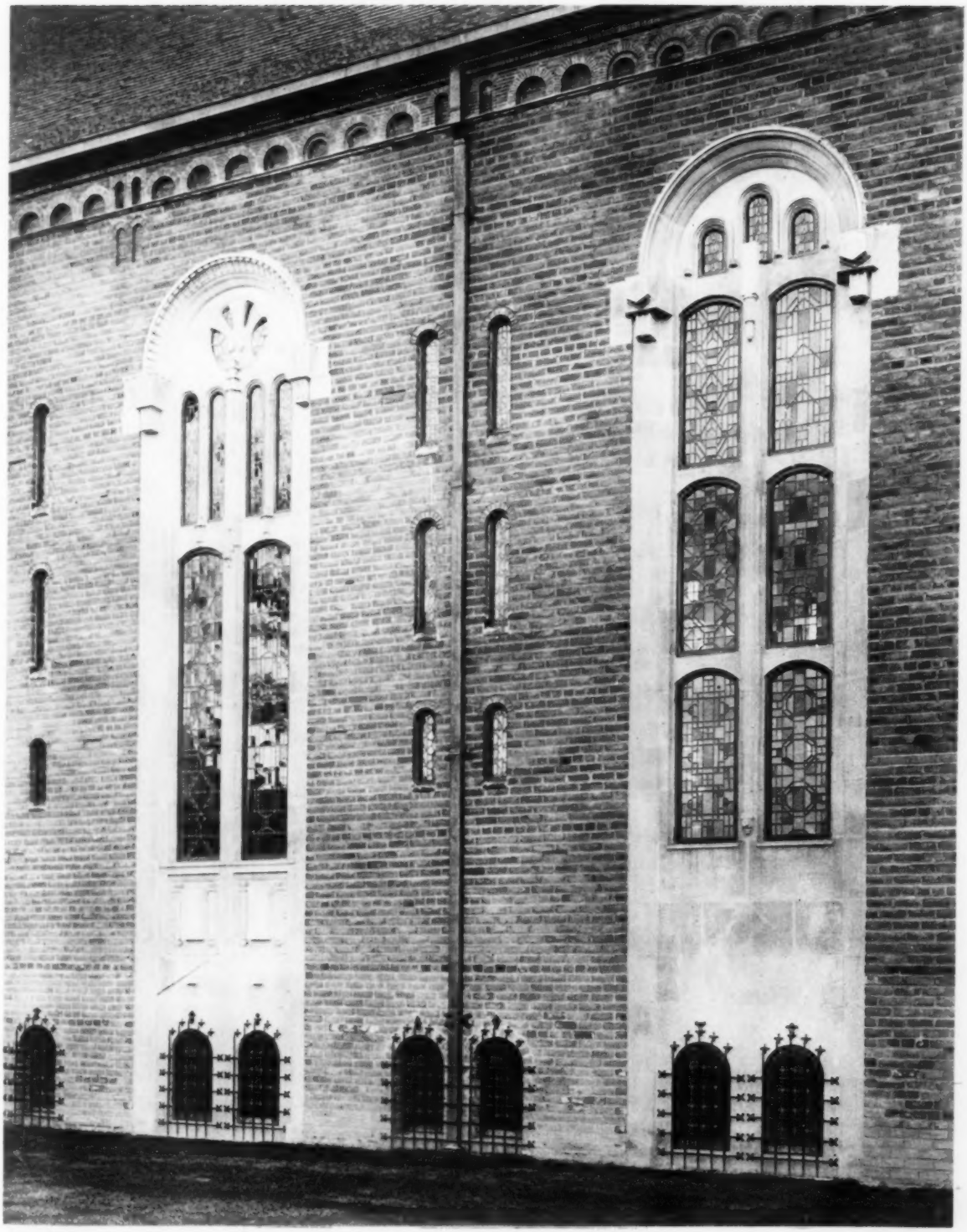


Photo Nyholm

Detail, Dining Hall
Cranbrook School, Bloomfield Hills, Michigan
ELIEL SAARINEN, ARCHITECT

Photo Nyholm

Interior, Dining Hall
Cranbrook School, Bloomfield Hills, Michigan
ELIEL SAARINEN, ARCHITECT

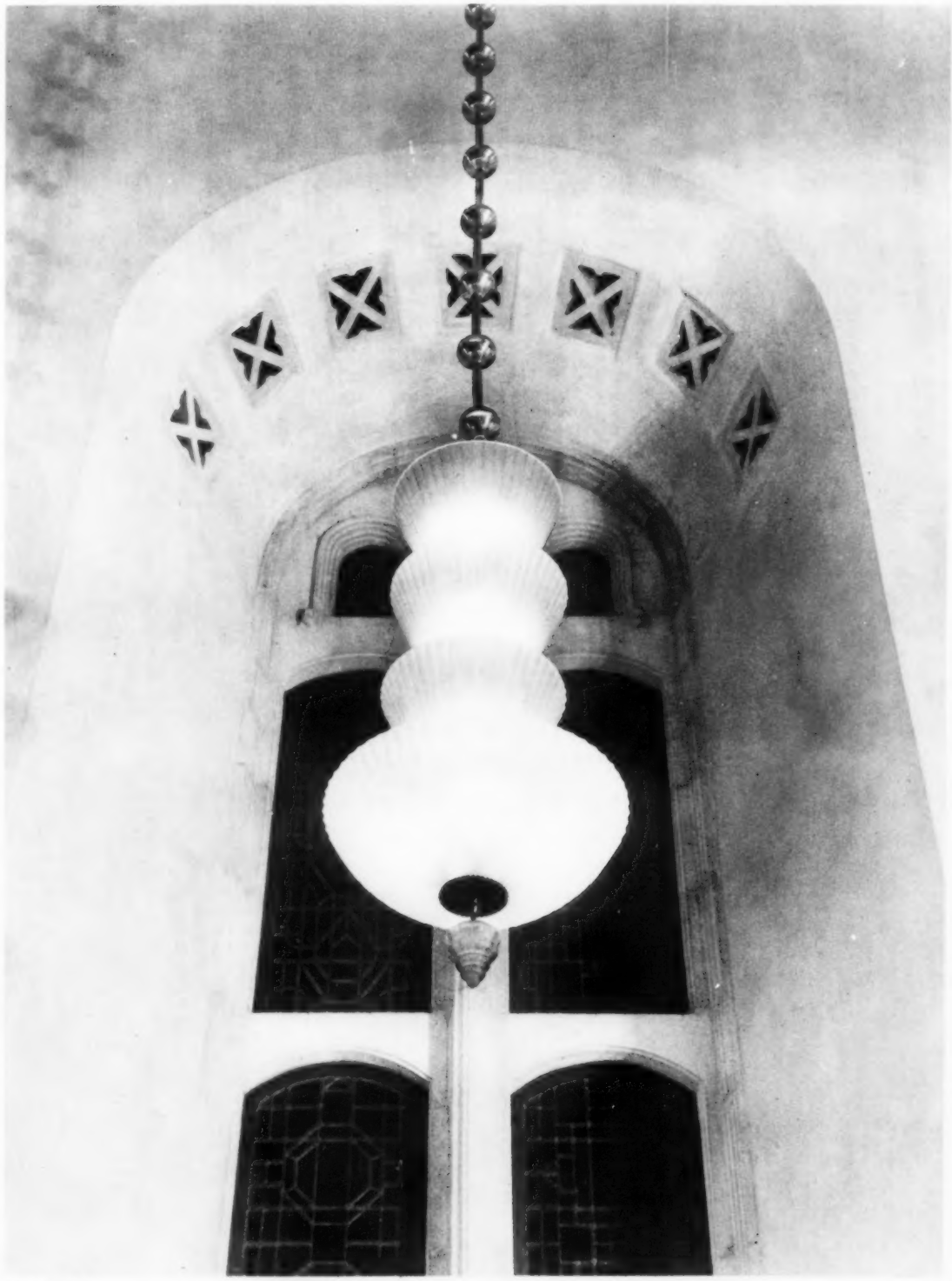


Photo Nyholm

Lighting Fixture in Dining Hall
Cranbrook School, Bloomfield Hills, Michigan
ELIEL SAARINEN, ARCHITECT

Photo Nyholm

Interior Observatory Tower
Cranbrook School, Bloomfield Hills, Michigan
ELIEL SAARINEN, ARCHITECT

Photo Nyholm

Fireplace, North Lobby
Cranbrook School, Bloomfield Hills, Michigan
ELIEL SAARINEN, ARCHITECT

Photo Nyholm

Staircase in Dormitory
Cranbrook School, Bloomfield Hills, Michigan
ELIEL SAARINEN, ARCHITECT

IN THE CAUSE OF ARCHITECTURE

BY FRANK LLOYD WRIGHT

IX. THE TERMS

Enough, by now, has been said of materials to show direction and suggest how far the study of their natures may go. We have glanced at certain major aspects of the more obvious of building-materials only, because these studies are not intended to do more than fire the imagination of the young architect and suggest to him a few uses and effects that have proved helpful in my own work. The subject has neither bottom, sides nor top, if one would try to exhaust "the nature of materials"! How little consideration the modern architect has yet really given them. Opportunity has languished in consequence and is waiting, still.

Perhaps these articles have been guilty of "poetic" interpretation now and then, turning these "materials" over and over in the hand. The imagination has caught the light on them, in them as well, and tried to fix a ray or two of their significance in the sympathetic mind.

Poetry, Poetic, Romantic, Ideal.

These words now indicate disease or crime because a past century failed with them and gave us the *language* of form—instead of the significant form itself.

So if we are not to fall into the category of "language" ourselves, I owe an explanation of the meaning of these words, for I shall continue to use them.

It has been common practice among artists to apply the terms qualifying one art to another art—say, those of Music to Architecture or vice-versa. This may be done because certain qualities in each are common to all. It may be helpful to make comparisons between them to bring out particular significance, as our English vocabulary is poor at best in all the words we have with which to express shadings of qualities or of our feeling in dealing with qualities.

We can hack away at the thing with our body-terms and get the subject anywhere or nowhere except misunderstood.

Nor do we speak a common tongue in the use we have come to make of these main words. We may pack into each of them more or less, and differently, than another would dream of doing, or could do. So it is well to clean them up—for now we are going to write about the uses and purposes of "materials" in creating this thing we name Architecture.

"Poetry of Form," for instance, is a phrase that will now make almost any sensible man sick.

The word "poetry" is a dangerous word to use, and for good reason. Carl Sandburg once said to me,—"Why do you use the words 'poetry,' 'beauty,' 'truth' or 'ideal' any more? Why don't you just get down to tacks and talk about boards and nails and barn doors?"

Good advice. And I think that is what I should do. But I won't, unless I can get an equivalent by doing so. That equivalent is exactly what I cannot get. Those words—romance, poetry, beauty, truth, ideal—are not precious words—nor should they be *specious* words. They are elemental human symbols and we must be brought back again to respect for them by using them significantly if we use them at all, or go to jail.

Well, then—our lot being cast with a hod of mortar, some bricks or stone or concrete and the Machine, we shall talk of the thing we are going to do with these things in the terms that are sensible enough when we speak of the horse-hair, cat-gut, fine wood, brass and keys, the "things" that make up the modern orchestra. By the way, that

orchestra is New. Our possibilities in building with the Machine are New in just the same sense.

Although Architecture is a greater art than Music (if one art can be greater than another) this architect has always secretly envied Bach, Beethoven and the great Masters of Music. They lifted their batons after great and painful concentration on creation and soared into the execution of their designs with a hundred willing minds—the orchestra—and that means a thousand fingers quick to perform every detail of the precise effect the Master wanted.

What a resource!

And what facility they were afforded by forms—they made them—moving according to mood from fugue to sonata, from sonata to concerto—and from them all to the melodic grandeur and completeness of the symphony.

I suppose it is well that no architect has anything like it nor can ever get it.

But as a small boy, long after I had been put to bed, I used to lie and listen to my father playing Beethoven—for whose music he had conceived a passion—playing far into the night. To my young mind it all spoke a language that stirred me strangely, and I've since learned it was the language, beyond all words, of the human heart.

To me, architecture is just as much an affair of the human heart.

And it is to architecture in this sense that we are addressing ourselves. We are pleading here in that cause.

What, then, is Poetry of Form?

The term has become a red rag or a reproachful tag to architects at home and abroad. And, too, it is something that clients would rather not hear about. For all clients are, to some degree, infected by this contact with architects. And some of the best among them fall ill with Neo-Spanish that was itself Neo-Italian or some kind of Renaissance of the Renaissance, or linger along Quasi-Italian, or eventually die outright of Tudor or Colonial.

It is a new form of the plague—"this poison of good taste," as Lewis Mumford has precisely called it. This "poison" has cursed America for generations to come. And this happened to the good people who spoke the language of "Poetry of Form" and hopefully sought the "Romantic" when they became clients.

"Poetry of Form," in this romantic, popular sense, has not only cost wasted billions in money but has done spiritual harm beyond reckoning to the America of the future. But the fact remains that America wanted it and sought it. The failure is less significant than the fact.

So instead of speaking of "Poetry of Form" in buildings, perhaps, after all, we would do better to say simply the natural building, naturally built, native to the region.

Such a building would be sure to be all that Poetry of Form should imply, and would mean a building as beautiful on its site as the region itself.

And that word ROMANCE, Romantic or Romanza, got itself born in literature a century ago. Later Novalis and his kind chose the blue flower as its symbol. Their Romance was rather an escape from life than any realization of the idealization of it. As the word is popularly or commonly used today, it is still something fanciful, unlike life. At least it is something exotic. "Romance" is used as a word to indicate escape from the pressure of the facts of life into a realm of the beyond—a beyond each one fashions for himself or for others as he will —or may—dream.

But in music the Romanza is only a free form or freedom to make one's own form. A musician's sense of proportion is all that governs him in it. The mysterious remains just enough a haunting quality in a whole so organic as to lose all tangible evidence of how it was made—and the organic whole lives in the harmonies of feeling expressed in sound. Translate "sounds and the ear" to "forms and the eye" and a Romanza,

even, seems reasonable enough, too, in architecture.

And now that word IDEAL.

The IDEAL building? Why, only that building which is all one can imagine as desirable in every way.

And POETRY? Why, the poetry in anything is only the song at the heart of it—and in the nature of it.

Gather together the harmonies that inhere in the nature of something or anything whatsoever, and project those inner harmonies into some tangible "objective" or outward form of human use or understanding, and you will have Poetry. You will have something of the song that aches in the heart of all of us for release.

Any of these Arts called "Fine" are POETIC by nature. And to be poetic, truly, does not mean to escape from life but *does* mean *life raised to intense significance and higher power*.

POETRY, therefore, is the great potential need of human kind.

We hunger for POETRY naturally as we do for sunlight, fresh air and fruits, if we are normal human beings.

To be potentially poetic in architecture, then, means—to create a building free in form (we are using the word Romanza) that takes what is harmonious in the nature of existing conditions inside the thing and outside it and with sentiment—(beware of sentimentality)—bring it all out into some visible form that expresses those inner harmonies perfectly, *outwardly*, whatever the shape it may take.

In this visible shape or form you will see not only what was harmonious in the existing conditions inside and outside and around about the building, but you will also see, in this sentiment of the architect, a quality added from the architect himself—because this ultimate form inevitably would be *his* sense of BEAUTY living now for you in these known and visible terms of his work.

These words—Poetry, Romance, Ideal—used in proper sense—and I believe I have given them proper expression and interpretation here—are indispensable tools in getting understood when talking of creation.

At any rate, I shall use them, always in the sense I have just given them.

And there is need of another term to express a new sense of an eternal quality in creation.

Need, really, of a new dimension?

Either a new dimension to think with or a new sense of an old one.

We have heard of the fourth dimension frequently, of late, to meet this need. Why a fourth dimension, when we so little understand the possibilities of what we already use as the three dimensions?

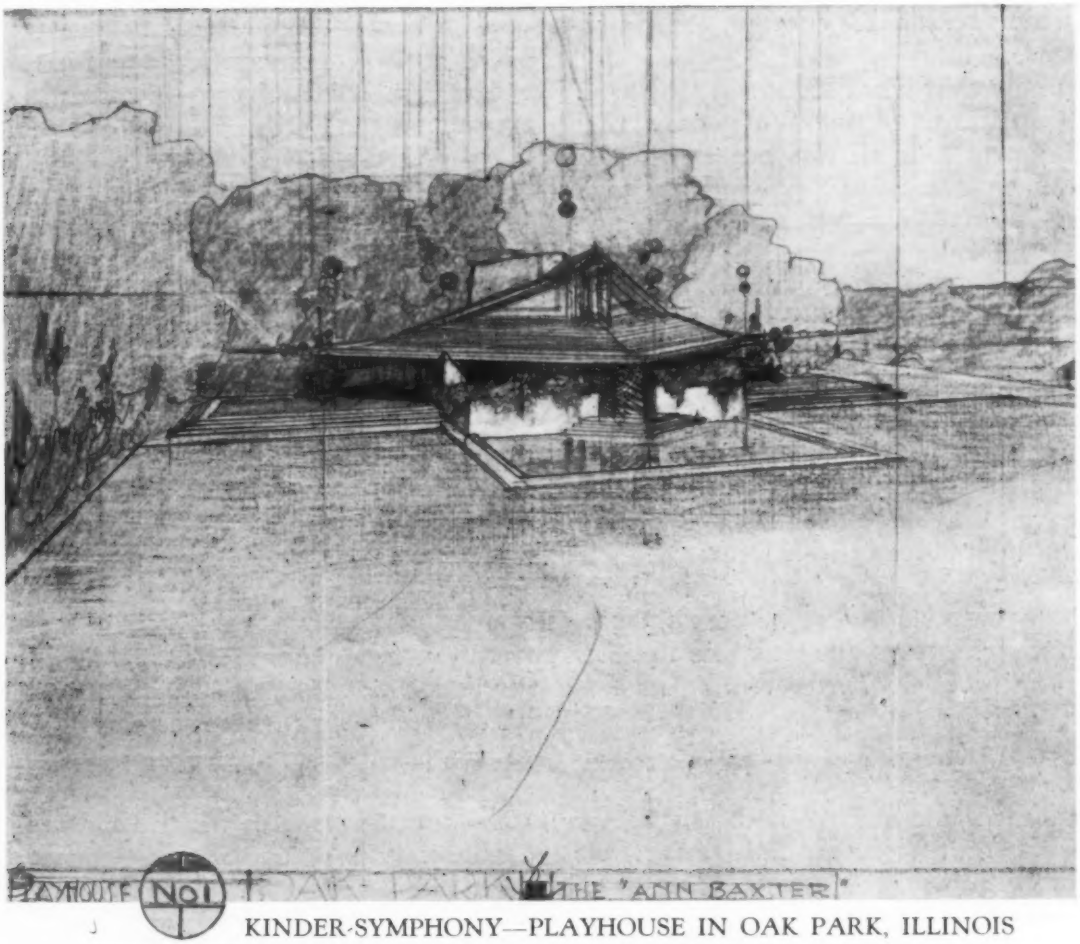
If we make the first two (length and width) into one, as really they are both merely surface, and then add the third (thickness) as the second, thus getting mass, we will have an empty place as third in which to put this new sense as the missing dimension I shall describe. Thus comes in the third dimension about which I have talked a good deal and written somewhat.

Or suppose we arrive at it another way by simply giving spiritual interpretation to the three dimensions we already use. Say length (the first dimension) becomes continuity, width (the second dimension) becomes that breadth of which we speak when we refer to the measure of some great man's mind or a great prospect. Then thickness (the third dimension) becomes "depth" and we give to that word, "depth," the meaning we give to it when we speak of the "profound," the organic, the integral—again we have the third dimension.

We reach the missing dimension either way, but reach it we must.

For it is necessary to find some term that will make it easy to express this missing quality in discussing creation and reaching within for understanding.

But why say fourth dimension when, by properly interpreting the three we already have and by giving them the higher sig-



KINDER-SYMPHONY—PLAYHOUSE IN OAK PARK, ILLINOIS
ONE OF A GROUP OF BUILDINGS FOR THE PLAYGROUND BOARD OF OAK PARK, ILLINOIS
FRANK LLOYD WRIGHT, ARCHITECT

nificance which is theirs by nature, we may be spared the confusion of more mere numbers?

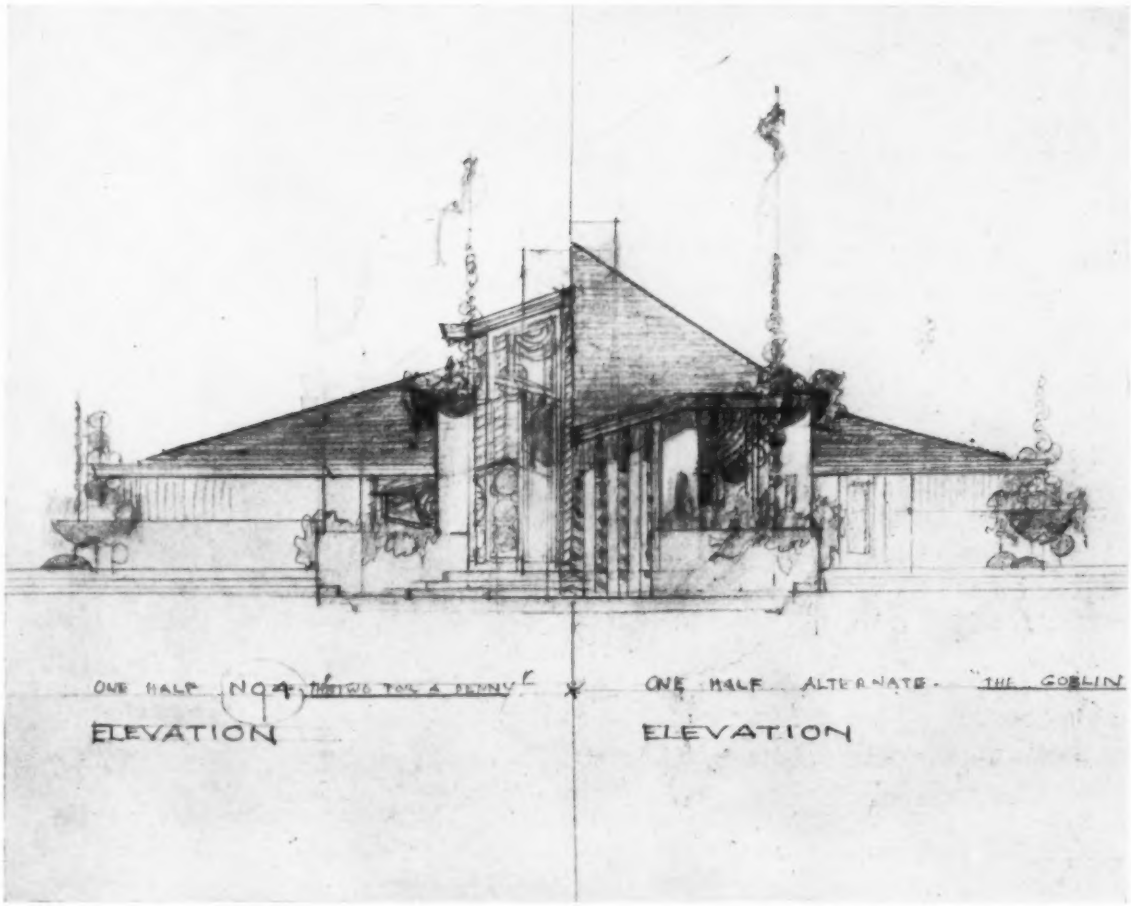
This, then, is what I mean by the third dimension. Either an interpretation of the physical third, an interpretation that signifies this quality of "at-one-ness" or integral nature in anything or everything. Or, arrive at it by naming the three dimensions as now used as actually but two, adding the third as a new concept of organic-integrity, or more properly speaking, as that *quality* that makes anything *of* the thing and never on it.

Thus came the new conception of architecture as interior-space finding utilization and enclosure as its "*members*"—as architecture. The *within* is thus made concrete realization in *form*.

This is the *integral* concept of building for which I have pleaded, am still pleading and will continue to plead, instead of the earlier one—beautiful but less great—in which a block of building material was sculptured, punctured, and ornamented into architecture.

In this matter of supplying the needed term as the third dimension I may be found guilty of making a language of my own to fit my necessity.

Perhaps that is true—although it seems obvious enough to me that the quality lacking in the thought of our modern world where creation is concerned, is simply ex-



KINDER-SYMPHONY—PLAYHOUSES IN OAK PARK, ILLINOIS
BUILDINGS DESIGNED FOR THE PLAYGROUND BOARD OF OAK PARK, ILLINOIS
FRANK LLOYD WRIGHT, ARCHITECT

pressed in this way. I should be thankful for a better, more evident expression of this subjective element.

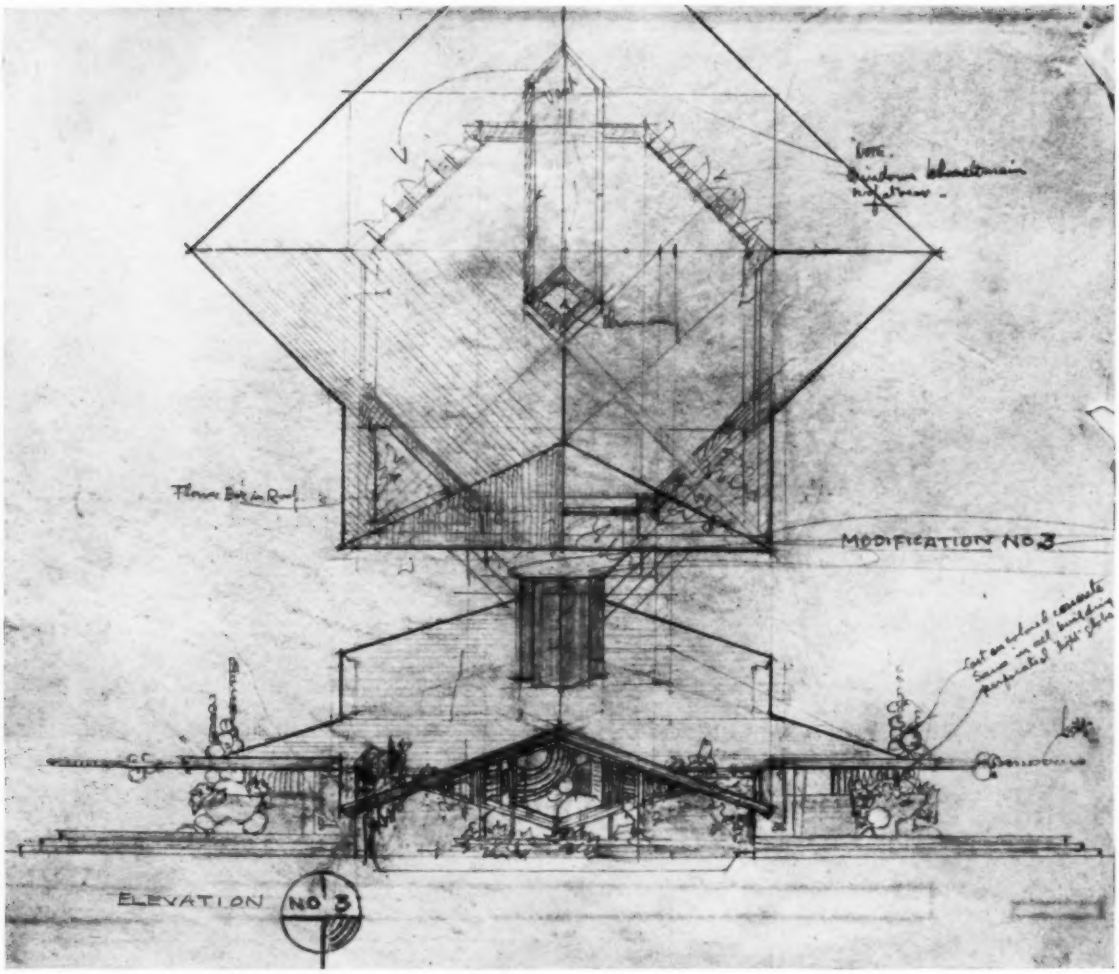
If I could find it I should be among the first to use it.

Until then I can only write and speak of this essence of all creative endeavor, objectively, as the third dimension. And here in this matter will be found the essential difference between what is only modern and what is truly new.

The pictorial age in which we live will no longer be satisfied to have the picture continue without this interior significance expressed in integral form. Two dimensions have characterized the work of the past centuries and two-dimension thought and work is still modern, it seems. Is it too much to hope that the coming century will be one in which this element of the third dimension —this demand for organic significance— will characterize all the pictures that go to make up the main picture, which will be then tremendous with integrity and pregnant with new beauty?

Now, there are certain things as hard as nails, as pointed as tacks, as flat as a barn door that go to make up the technique of creation in this deepened, enlivened, more potential sense.

Since we now have materials in our hands to work with as elements, it is method that I now want to write about, believing that if I can make even the beginning of the



KINDER-SYMPHONY—A PLAYHOUSE IN OAK PARK, ILLINOIS
ELEVATION OF PLAYHOUSE NO. 3 AND MODIFICATIONS MADE ABOVE MAIN ROOF
FRANK LLOYD WRIGHT, ARCHITECT

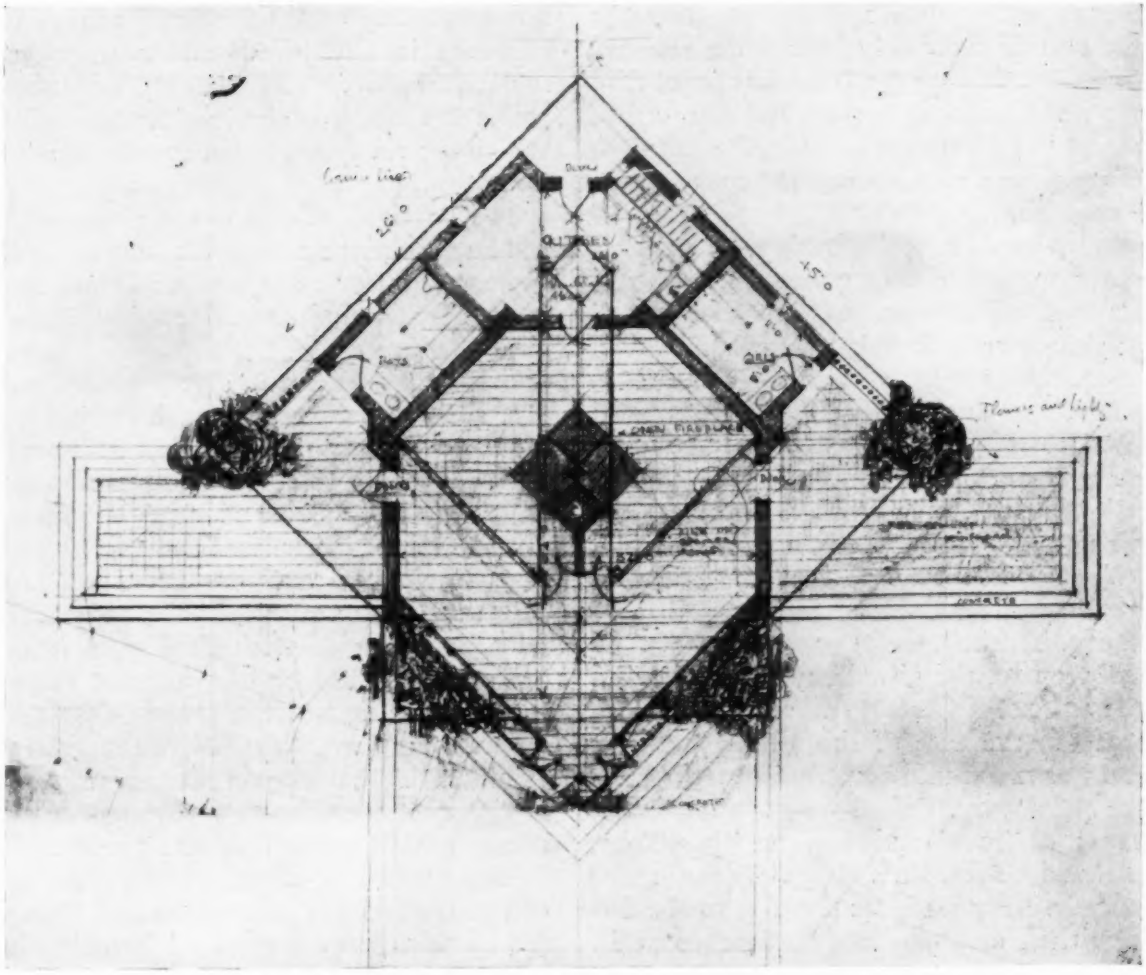
matter of making true, significant buildings a little more clear, I shall have rendered real service. I would much rather build than write about building, but when I am not building, I will write about building—or the significance of those buildings I have already built.

The conception of the room *within*, the interior spaces of the building to be conserved, expressed and made living as architecture—the architecture of the *within*—that is precisely what we are driving at, all along. And this new quality of thought in architecture, the third dimension, let us say, enters into every move that is made to make it—enters into the use of every material; enters the working of every method we shall use or can use. It will characterize every form that results naturally from this integral interpretation of architecture in its demand upon us for integrity of means to ends—for integrity of the each in all and of the all in all in whatever we do—yes, from pig to proprietor, from a chicken-house to a cathedral.

One more word is indispensable to get the essence of this matter of creation visible on the surface.

That word is PRINCIPLE.

In an earlier paper, there is an attempt to



KINDER-SYMPHONY—PLAYHOUSES IN OAK PARK, ILLINOIS
GROUND PLAN. THE SAME GROUND PLAN WAS USED IN ALL FOUR BUILDINGS
FRANK LLOYD WRIGHT, ARCHITECT

define character and to throw some light on the vexed matter of style!

Principle is the working scheme, or the scheme at work in character, style, integrity, truth or beauty. It is not a motif but a means. We might say principle is the law that governs the production of any one or all of them.

The principle of anything is the law that works its being.

Natural law is principle, or the other way around, as you please. Our application of what we understand of principle is mostly expedient, seldom a genuine working of principle. That is all that is the matter with us. Principle is the tool with which the architect must consciously work to be a safe man or get great effects in his work.

He may be an artist—that is, he may be sentient to his finger-tips and be merely artistic without this command of principle, or, let us say, without this noble submission to its command, never knowing the command when seen or heard or "sensed."

In command of principle or commanded by it, only so is the artist potential in creation.

This miserable assumption of virtues, though one has them not, may be expedient but it is all the hell there is attached to this

affair of getting spirit materialized in works that gratify supremely human desires—we might say, getting the Beautiful born. And then have someone pop up and say with a sneer, "Yes, but what is beauty?" as though beauty were a commodity like soap, cheese or tobacco.

Well, yes. Here, in beauty, is another word to stumble over or mumble with in this age of the pragmatic "expedient" which, after all, is only an experiment.

But, now we have them all in a row—Poetry, Romantic, Ideal, Beauty—faithful mistresses of principle which we may now name Truth. And "Integrity," "Character," "Style," are attributes, merely, of the working of the master—Principle.

What is Beauty? And Keats' "Ode to a Grecian Urn" answers—"Truth, Beauty—Beauty, Truth."

Obviously, the gifted boy was right, but the nature of either is no nearer for his statement—in the case of the young architect who wants to build something that is both true and lovely. Before we get out of this, that word "love" and the word "joy," too, will get in, I feel sure. Here they are at this moment. Very well, let them in to the distinguished company they know so well. And then let us ask them for help.

"Art is the evidence of man's joy in his work," man has said. And that love is the motivating power in creation we all know by experience.

We are talking about creating or about creations, and this motivation, "Love," is essential to any conception of it—to any beginning of it.

Conceive, then, in love, and work with principle, and what men call Beauty will be the evidence of your joy in your work. After the purity and intensity of your desire or love, then, according to the degree that you have got command of Principle or willingly obey its commands, that materialization of spirit will appear in your work in earthly form—and men will call it Beauty.

Look about you at earthly forms! Trees, flowers, the reactions to one another of the elements in sky, earth and sea. All are merely effects of the working of definite principles with definite "materials"—which are really only elements in the creative hand.

The "design" of this in the altogether is too large in pattern to be yet comprehended by man, yet for our purposes in all or in each, we may find the evidence we seek of method in creation.

Method in creation?

It is there most certainly. Principle is at work continually in this school for architects—working there with simple materials and never-failing *ideas* of form. The form is a consequence of the principle at work. It would seem that no proper excuse for "making" anything ugly need ever be accepted from an architect—with all this prima facie evidence surrounding him, evident even in his own fingers as he writes or draws. He may study forms, "types" constructed by the infallible working of interior principles in this common school. What escapes us is the original idea or ultimate purpose.

This urge to create the beautiful for love of the beautiful is an inheritance. Enough for us that because of the inheritance we have carved out for ourselves with imagination, this higher realm of Beauty.

With imagination, then, let us try to learn the method of working principle with such simple elements as are everywhere put into our hands as materials. Love in our hearts—passion, yes, is essential to success, as our motif.

Now having done our best to light up these words and discuss the relationship existing between them, we will go on to talk of those matters, as hard as nails, as pointed as tacks, as flat as a barn-door, that are involved in the method—of creation.

Love no one can give. Assuming that inspiration is in the heart, we can show facts and performances with materials according to Principle that will be helpful to others in relation to method in creation.

ITALIAN STONEWORK

BY MYRON BEMENT SMITH

PART III

PAVILIONS (*Continued*)

PALAZZO STROZZINO, or LITTLE STROZZI, built 1457-63 by Guiliano da Maiano, perhaps with the help of his brother Benedetto. (Fig. 83). A two-storied palace, its design owes much to the Riccardi. The two top courses of the basement are tooled down to form a transition for the string course and drafted work above.

PALAZZO NERONI, built about 1475 as part of a larger scheme. (Fig. 62; also see page 330 of the October issue). The stones are more carefully worked than on earlier palaces of heavy rustication which suggests that these bosses may foretell those of the Strozzi.

PALAZZO ANTINORI, built in 1477 in Michelozzi's manner, perhaps by G. da Maiano. (Fig. 60; also pages 226 and 234 of the September issue). The three stories are treated the same. Equal blocks of ashlar in 23″ courses are laid in fine joints. The bosses project 1½″ from channels 1⅛″ to 1½″ wide, a ½″ radius at edges, joints at bottom of channels. The stones are about 45″ long. Due to the refinement of its simple wall the effect of this palace is more gracious than the Pazzi or the Riccardi. Political conditions probably warranted the design of a less fortresslike dwelling. The stone has taken on a marvelous patina.

PALAZZO BARTOLINI-SALEMBINI, built 1520 by Baccio d'Agnolo. (See page 231, September issue). The first Florentine palace in the Roman manner using rusticated angle pilasters in orders. The stone is *pietra forte*, badly weathered away but possessing a fine depth of color.

PALAZZO UGUCCIONI-FENZI, from a design by Raphael, built by Mariotto Folfi in 1530. (Figs. 65 and 72; also page 226 of the September and page 325 of the October issue). The narrow basement shows a strong and well conceived scheme of inter-related arches and wall. It is worthy of the closest study. Although the bosses of the rustication project 7½″, the same as the Palazzo Gondi, the effect here is of greater projection, as in this instance the profiles more closely approximate a semi-circle. Another detail that adds to the effect of strength is the treatment of the corners, returning the bosses on themselves instead of bringing them down to a channel face as was done on all previous Florentine work. Attention is directed to the narrow part of the voussoirs, where, in order to keep the front of the boss on line, it was necessary to make the section profile most abrupt. The course heights, reading up, are 21″, 18½″, 18½″, 18½″ etc. The 1/16″ joints come at the top of the boss. The channel lug is ⅞″ wide. The point tooling on the bosses is rather coarser than on the Palazzo Gondi. The moulded parts show careful point and chisel work, giving a good contrast of surface.

PALAZZO PANDOLFINI, from a design by Raphael, built in 1530 by G. and B. San Gallo. (Figs. 64 and 68; also page 227 in the September and page 325 in the October issue). The cornice has the date 1520 in its inscription. The *pietra forte* is used for trimming the walls of painted stucco. Dust has worked into the stucco and covers the stone to such an extent that they resemble each other in color save for the cornice which has preserved the buff color of the stone. The most interesting detail of the stonework is the portal. The rustication is deeply prick tooled on the bosses while the moulded parts are finished with a fine point and a

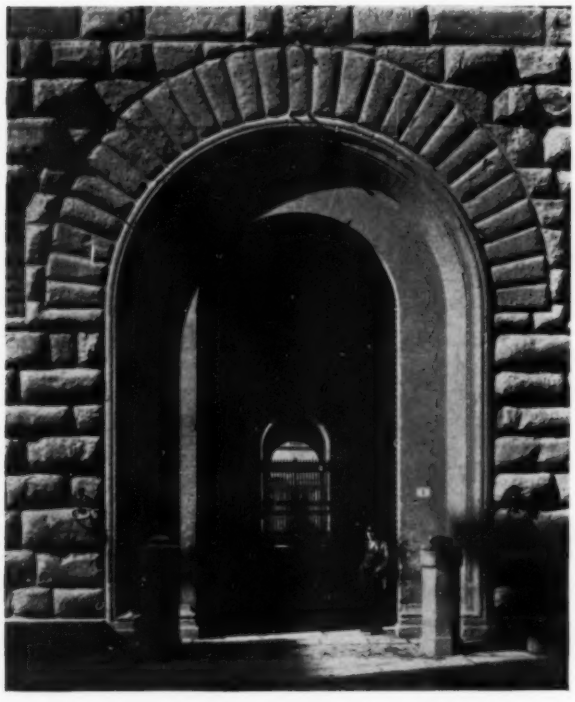


FIG. 56. ENTRANCE, PALACE RICCARDI, FLORENCE
MICHELOZZI, ARCHITECT, 1430

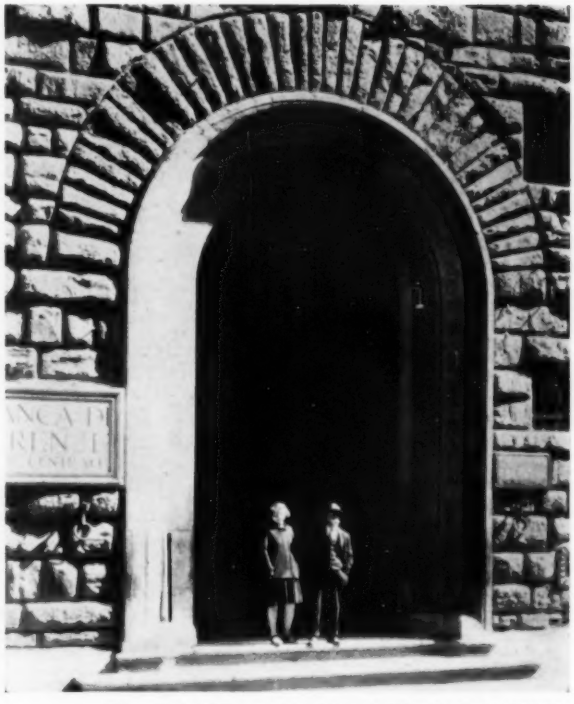


FIG. 57. ENTRANCE, PALACE PAZZI-QUARATESI, FLORENCE
BRUNELLESCHI, ARCHITECT, 1445

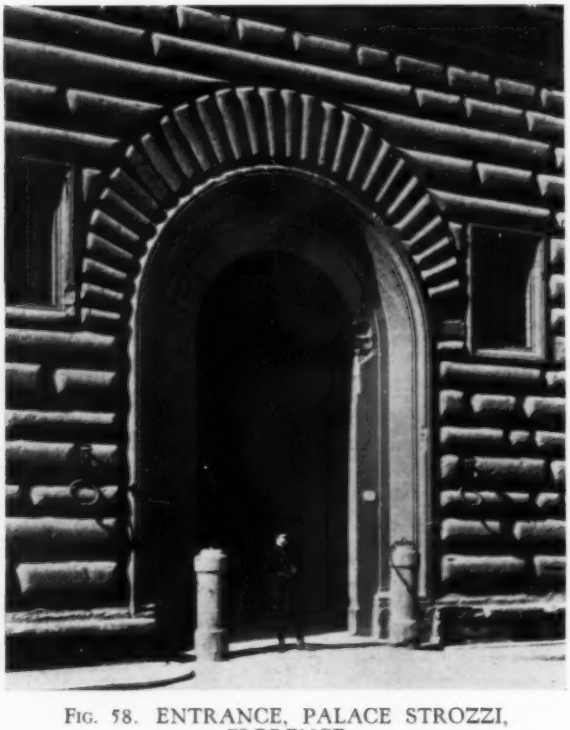


FIG. 58. ENTRANCE, PALACE STROZZI, FLORENCE
B. DA MAIANO, ARCHITECT, 1489

FIG. 59. ENTRANCE, PALACE GONDI, FLORENCE
G. DA SAN GALLO, ARCHITECT, 1490

ITALIAN STONEWORK. PART III

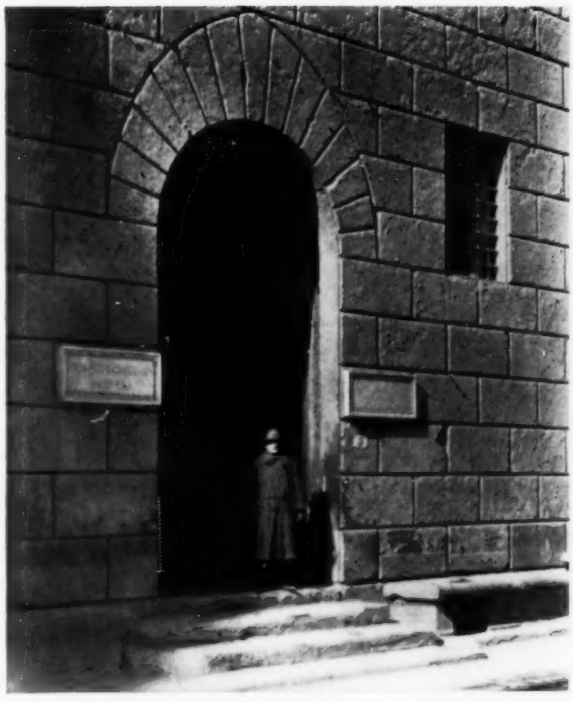


FIG. 60. ENTRANCE, PALACE ANTINORI, FLORENCE
MANNER OF MICHELOZZI, 1480

FIG. 61. ENTRANCE to PALACE GUADAGNI, FLORENCE
IL CRONACA, ARCHITECT, 1490

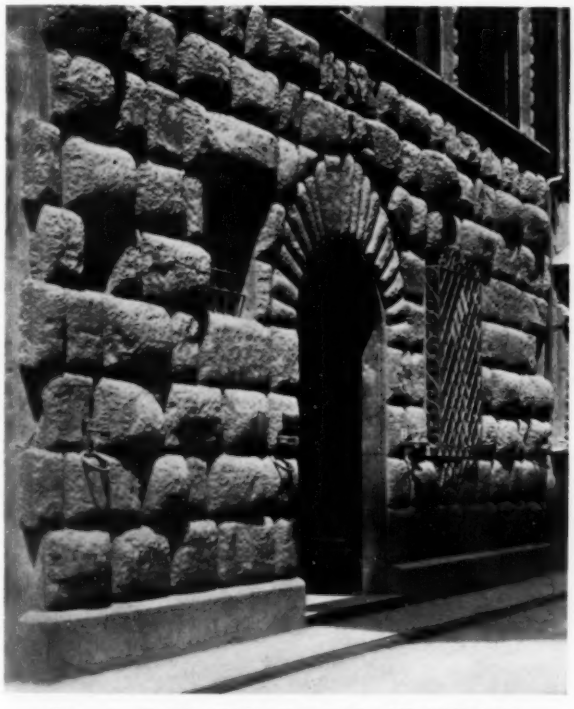


FIG. 62. ENTRANCE TO PALACE NERONI, FLORENCE
MANNER OF MICHELOZZI, C. 1475

FIG. 63. ENTRANCE, VILLA UZZANO, NEAR FLORENCE
Sixteenth Century

ITALIAN STONEWORK. PART III

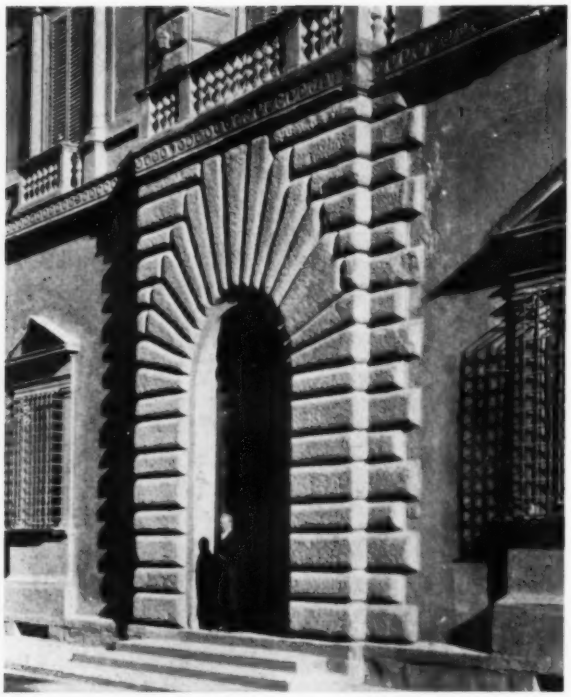


FIG. 64. ENTRANCE TO PALACE PANDOLFINI, FLORENCE
RAPHAEL AND SAN GALLO, ARCHITECTS, 1530

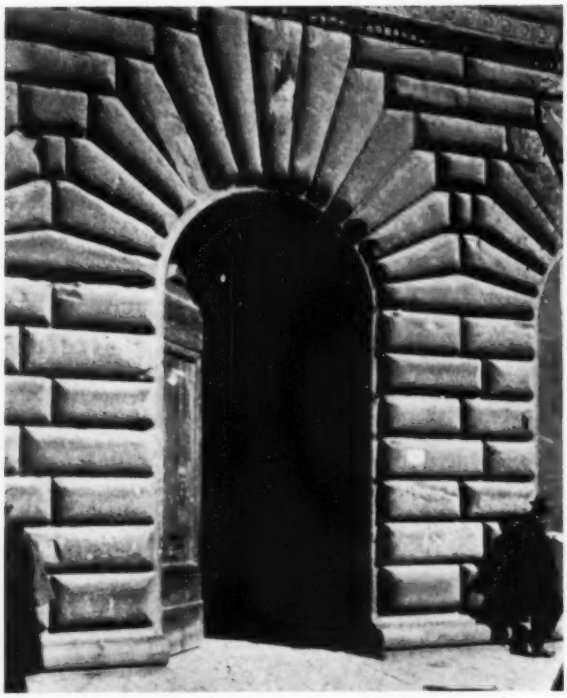


FIG. 65. ENTRANCE, PALACE UGUCCIONI, FLORENCE
FOLFI AND RAPHAEL, ARCHITECTS, 1530

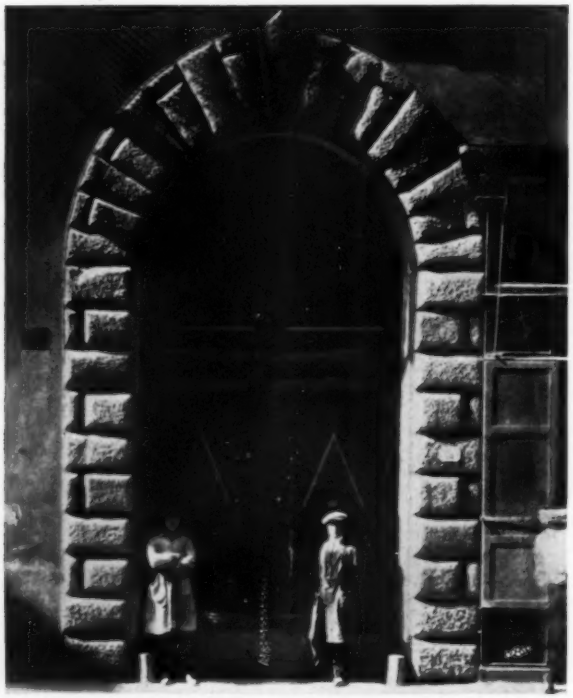


FIG. 66. ENTRANCE TO COURT, PALACE PUCCI, FLORENCE
CIRCA 1600

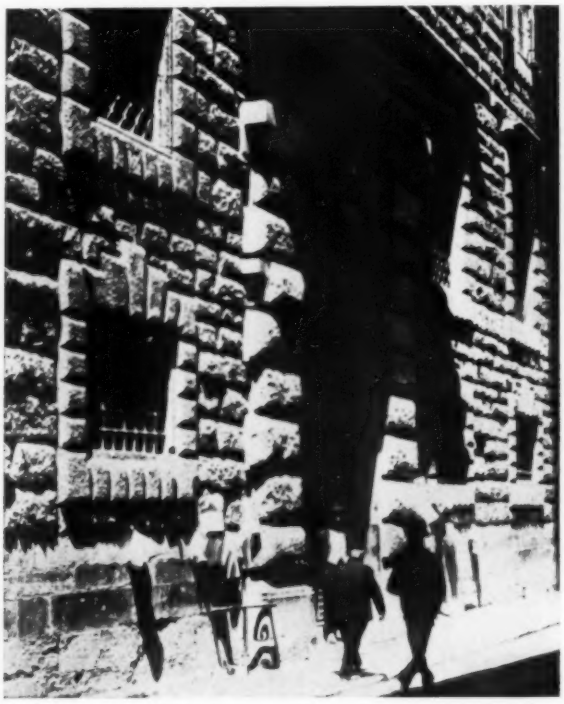


FIG. 67. REAR ENTRANCE, PALACE VECCHIO, FLORENCE
VASARI, ARCHITECT, 1540

FIG. 69. PALACE RICCARDI, FLORENCE
FAÇADE BY MICHELOZZI, 1430
WINDOWS BY MICHELANGELO

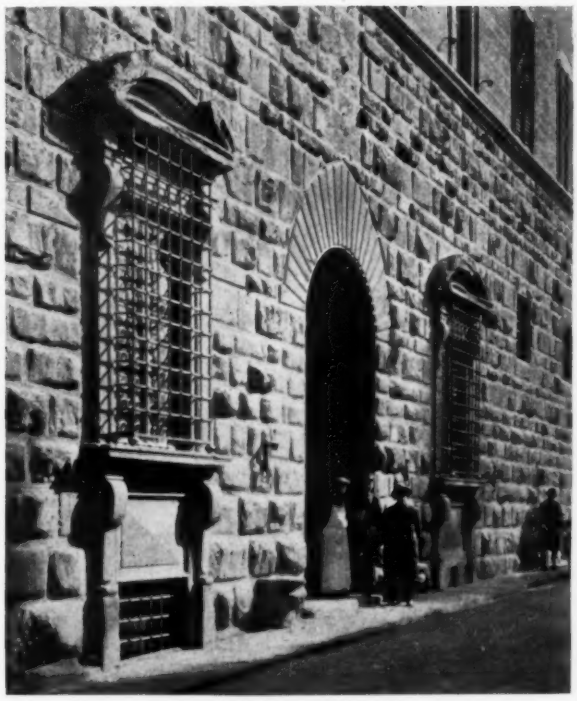


FIG. 70. PALACE, CAPPONI, FLORENCE
FAÇADE, CIRCA 1400
WINDOWS, BAROQUE

FIG. 71. BASE AND ANGLE, PALACE STROZZI, FLORENCE
B. DA MAIANO, ARCHITECT, 1489

FIG. 72. ANGLE AND BASEMENT, PALACE UGUCCIONI, FLORENCE
RAPHAEL, ARCHITECT, 1530

ITALIAN STONEWORK. PART III

FIG. 73. GARDEN PORTAL (17TH CENTURY), PALACE BOTTINI, LUCCA

FIG. 74. DOOR HEAD AND STRING COURSE, PALACE RUCELLAI, FLORENCE
ALBERTI, ARCHITECT, 1451

FIG. 75. SECOND FLOOR STRING COURSE, PALACE RUCELLAI, FLORENCE
ALBERTI, ARCHITECT, 1451

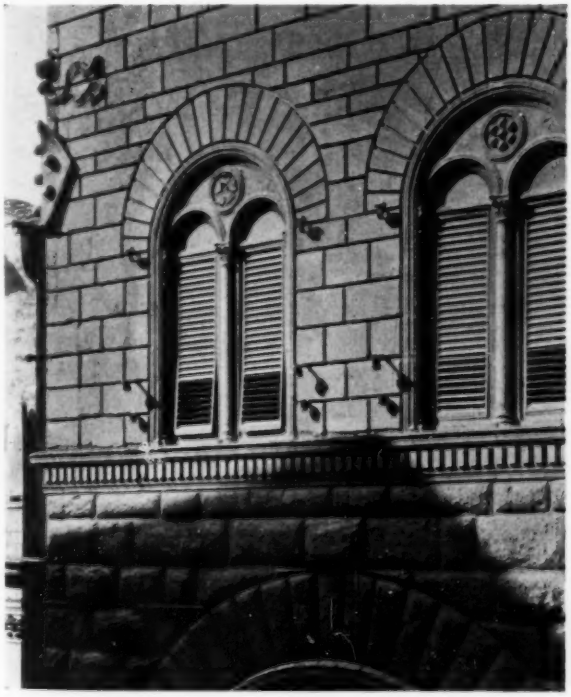


FIG. 76. SECOND FLOOR RUSTICATION, PALACE RICCARDI, FLORENCE
MICHELOZZI, ARCHITECT, 1430

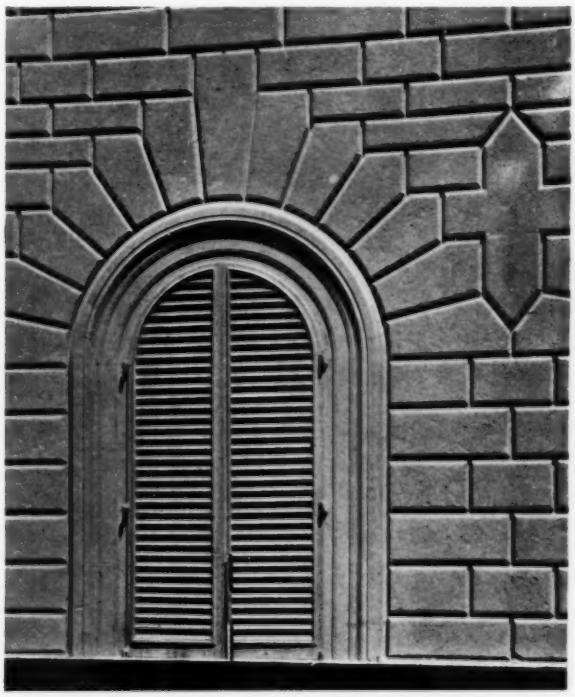


FIG. 77. WINDOW OF SECOND FLOOR, PALACE GONDI, FLORENCE
G. SAN GALLO, ARCHITECT, 1490

ITALIAN STONEWORK. PART III

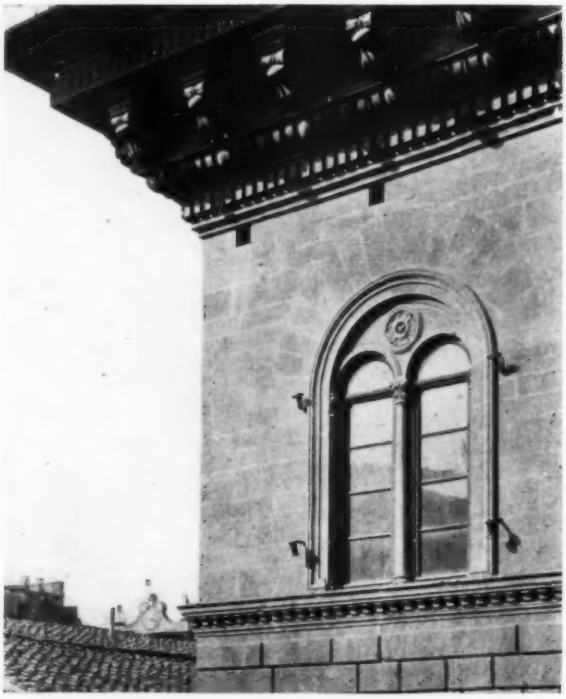


FIG. 78. CORNICE AND THIRD FLOOR, PALACE RICCARDI-MEDICI, FLORENCE
MICHELOZZI, ARCHITECT, 1430

FIG. 79. CORNICE AND THIRD FLOOR, PALACE PICCOLOMINI, SIENA
ROSSELLINO, ARCHITECT, 1460

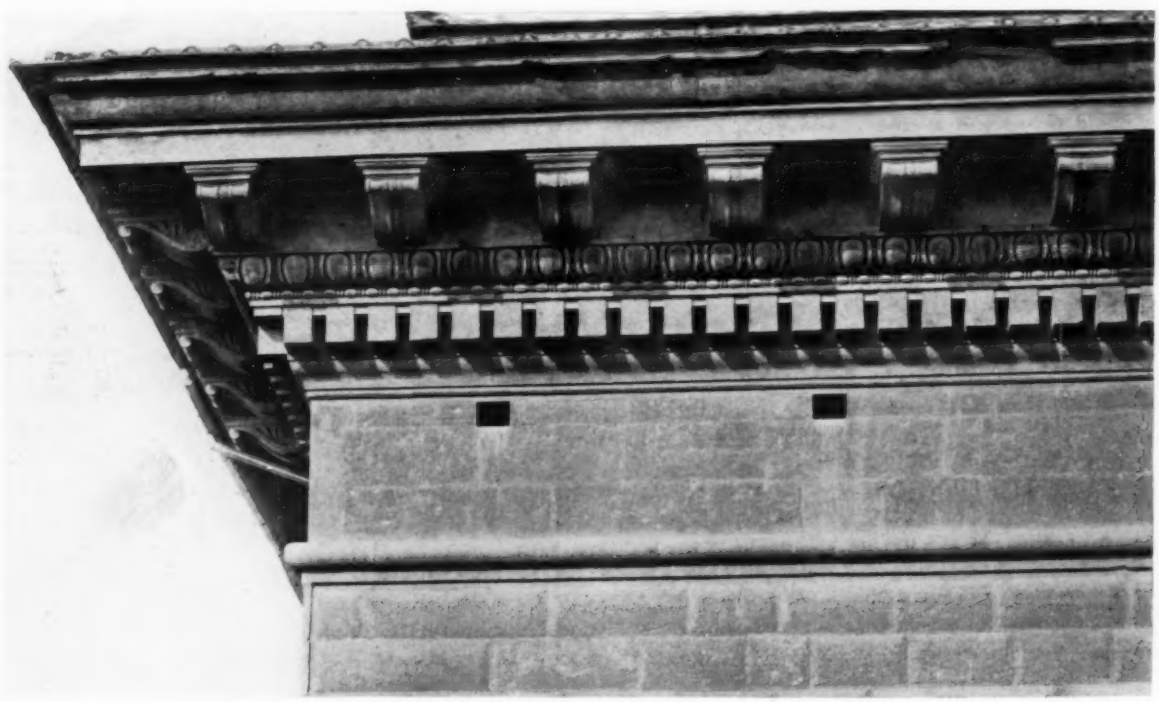


FIG. 80. CORNICE, PALACE STROZZI, FLORENCE
IL CRONACA, ARCHITECT. CIRCA 1525

FIG. 81. DETAIL OF FAÇADE, PALACE RAIMONDI, CREMONA
CIRCA 1496

FIG. 82. ANGLE, PALACE NONFINITO, FLORENCE
BUONTALENTI AND SCAMOZZI, 1592, 1602

FIG. 83. FAÇADE DETAIL, PALACE STROZZINO, FLORENCE
G. AND B. DA MAIANO, ARCHITECTS, 1457-1463

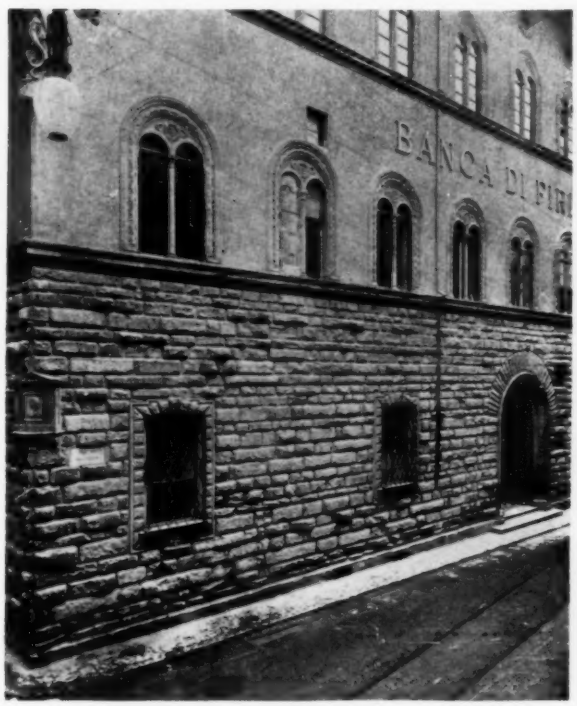


FIG. 84. FAÇADE, PALACE PAZZI-QUARATESI, FLORENCE
BRUNELLESCHI, ARCHITECT, 1445

ITALIAN STONEWORK. PART III

½" to ¾" draft at the edges. The bosses project 4½" from channels which vary from 1¼" to 1½" in width. The lugs are on the bottom of the stones as appears in the quoining. The heights of the stones, reading up, are: 20½", 15½", 20½", 15½", 19¾", 15½" etc. Here, as on the Uguccioni, the bosses return on themselves at the angle.

Fortezza da Basso, built in 1534 by Antonio San Gallo the younger. (page 230, September issue). A fortress wall of great interest. The ball and the apex of the rectangular stone project 3¾". The courses are 17", the long stone measures 36". The channel is ⅞" wide. The stone is worked with a fine point save at the edges where a ½" draft follows the angles.

Palazzo Ginori, Baccio d'Agnolo, architect, c. 1550. (Fig. 16, page 229, September issue). The courses are 12" high. The wall ashlar shows the horizontal bands of point chisel strokes. At the joints is a narrow flat chisel draft.

Palazzo Vecchio, rear façade. Vasari designed it in 1540. (Fig. 67). The heavy rustication at the doorway fails because its surface is not sufficiently differentiated from that of the wall.

Palazzo Niccolini-Bouturlin, by G. Baccio d'Agnolo, 1550. (Fig. 15, page 229, September issue). The photo shows an end pilaster treated with ashlar rustication of 3" projection. The arrises of the bosses are worked to a sharp angle with a narrow draft. The field is point tooled to a texture a little coarser than that of the wall alongside. The courses are 9¼" high, the channels 1⅛" wide.

Palazzo Grifoni, by Ammanati, 1565. (Fig. 14, page 229, September issue). A brick palace with trim of *pietra forte*. The corner rustication shows a surface of medium point tooling with the arrises of the bosses picked out with a ½" draft.

Palazzo Giacomini-Larderel, Giovanni Ant. Dosio, 1580. (Fig. 24, page 231, September issue). The pilaster rustication projects 1⅞" from the channel, with a 1" radius. The courses are 12" high, the channels ⅝" wide. Fine tooling covers the bosses.

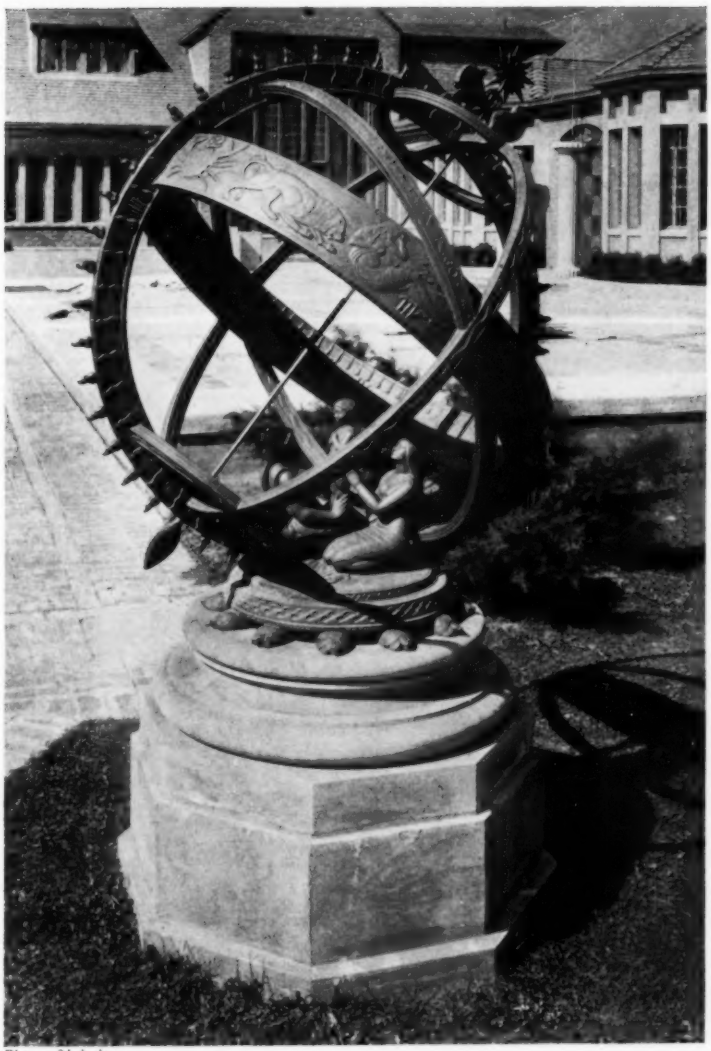
Palazzo Nonfinito, basement by Ber. Buontalenti, 1592. Upper story by Vinc. Scamozzi, 1602. Court by Luigi Cigoli. (Fig. 82; see also pages 227, 231, 232 in the September issue and 325 in the October issue of The Record.) Built of *pietra forte*. The basement walls are rusticated coursed ashlar with an involved rusticated pilaster treatment at the corner. The wall stones project 2" from a channel face ⅝" wide. The edges of the bosses are rounded on a 1" radius while the surface is tooled with vertical broaching in grooves ⅜" on centers. At the corner the pilaster bosses project 4⅜". The broaching matches that of the side walls. An excellent contrast of surface is maintained.

Palazzo Pucci, a Baroque palace, circa 1600. Fig. 66 shows a portal with interesting rustication. The long voussoirs have a slightly greater projection. In the rear court of the Palazzo Riccardi is a larger portal of the same design.

Palazzo Orlandini, (Monte dei Paschi), Ciro Ferri, architect. Fig. 28, page 232 of the September issue, shows a window console of this late Baroque building. The detail displays a variety of surface textures. Most noteworthy is the rustication of the monolithic console which has channels ⅝" deep on the curved surface and but half that depth on the sides. The side wall, in 15" courses, has channels 1" deep and 1¾" wide.

Siena, Palazzo Piccolomini, Bernardo Rossellino, architect, 1460. (Fig. 78). The stone is a travertine which either from its nature or from the red dust of the city takes on a warm tone of great beauty, grading darker to the base of the building. The rustication is the same on all three stories. The bosses project slightly over an inch with a radius at the edges that varies from ½" to ¾". The channels are from 1½" to 2" wide.

ALLIED ARTS
AND
CRAFTSMANSHIP



Photo, Nyholm

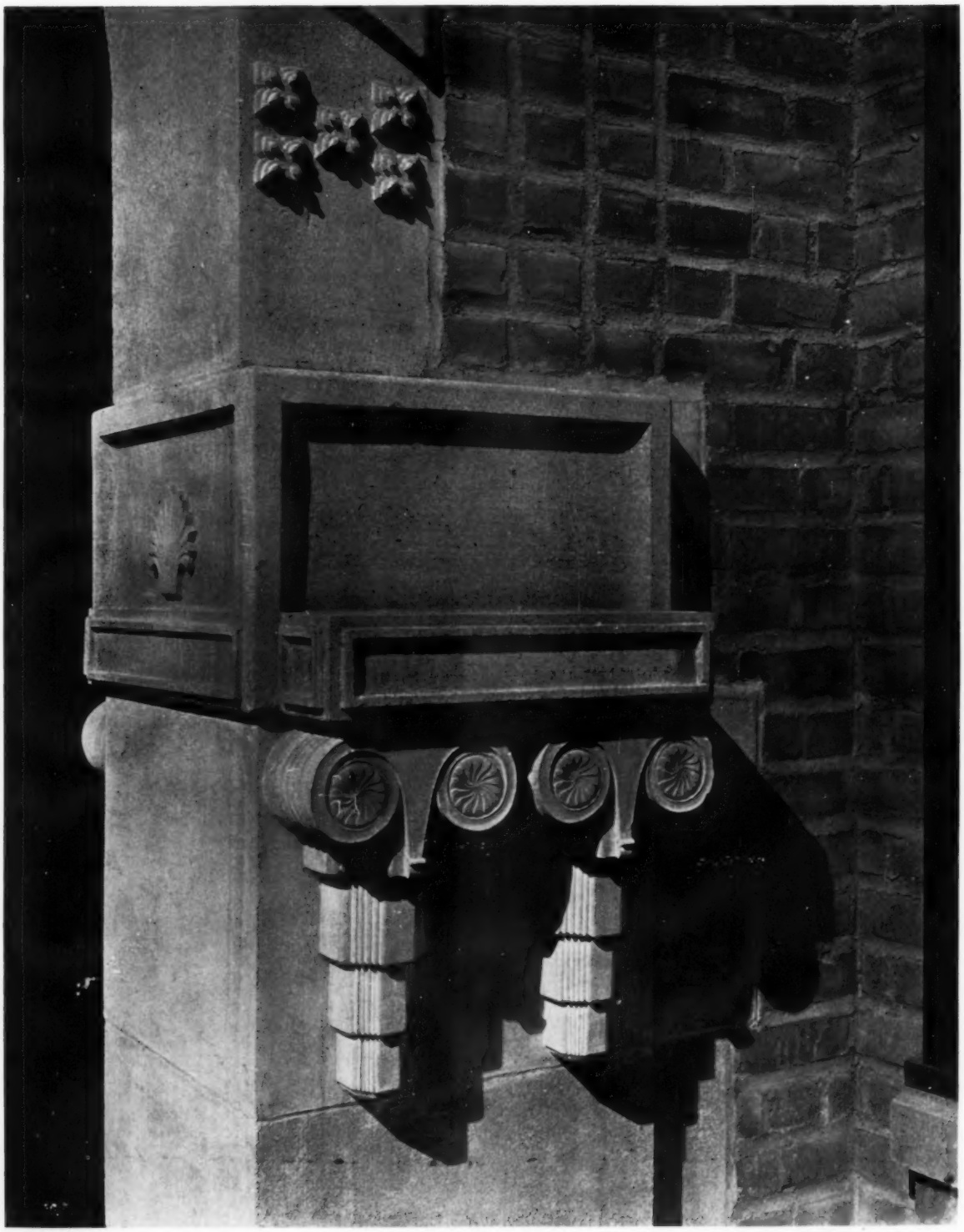
SUNDIAL, CRANBROOK SCHOOL, BLOOMFIELD HILLS, MICHIGAN

ELIEL SAARINEN, ARCHITECT

GEZA MAROTI, SCULPTOR

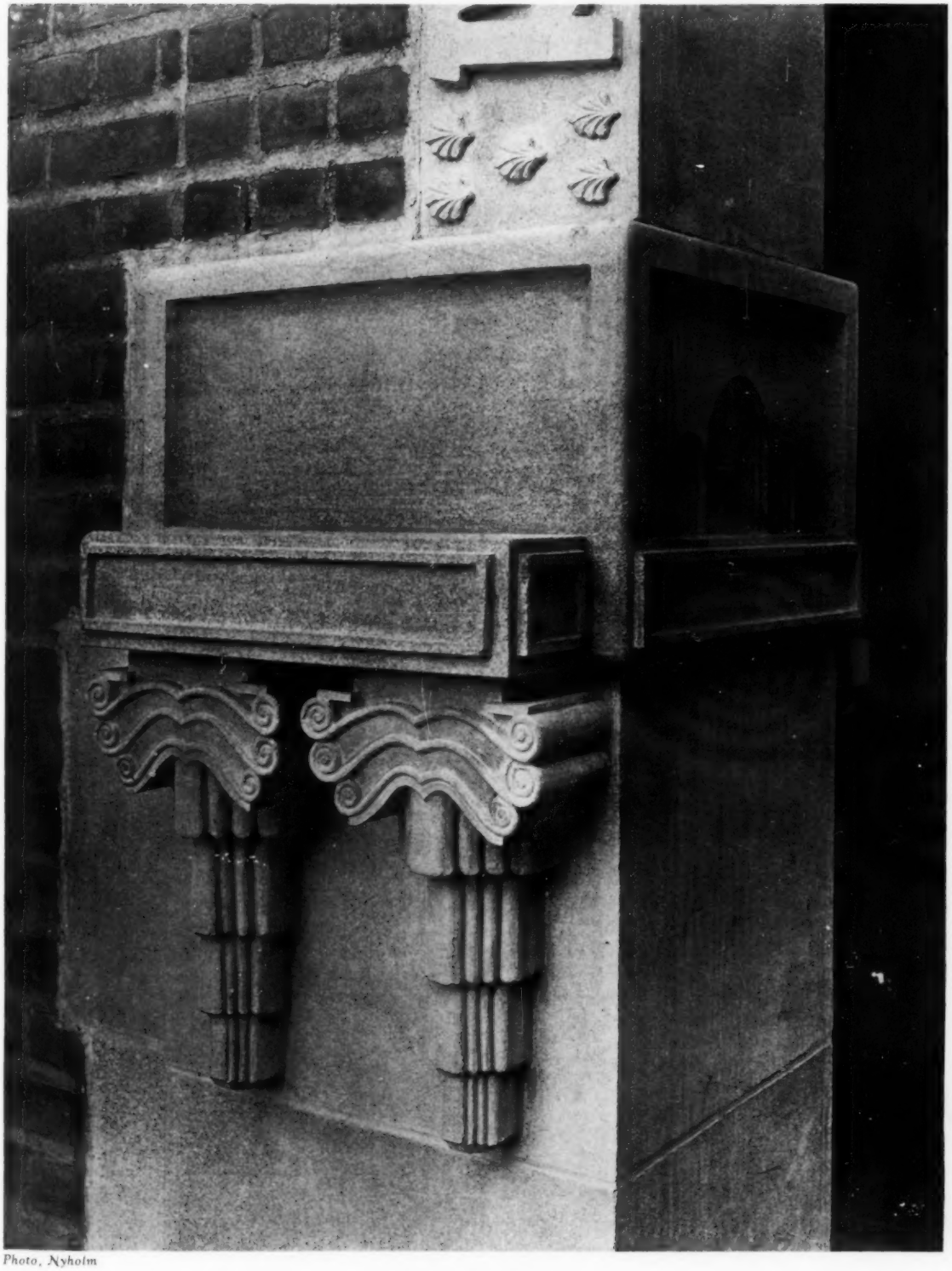
Featuring

CRANBROOK SCHOOL,
BLOOMFIELD HILLS, MICHIGAN



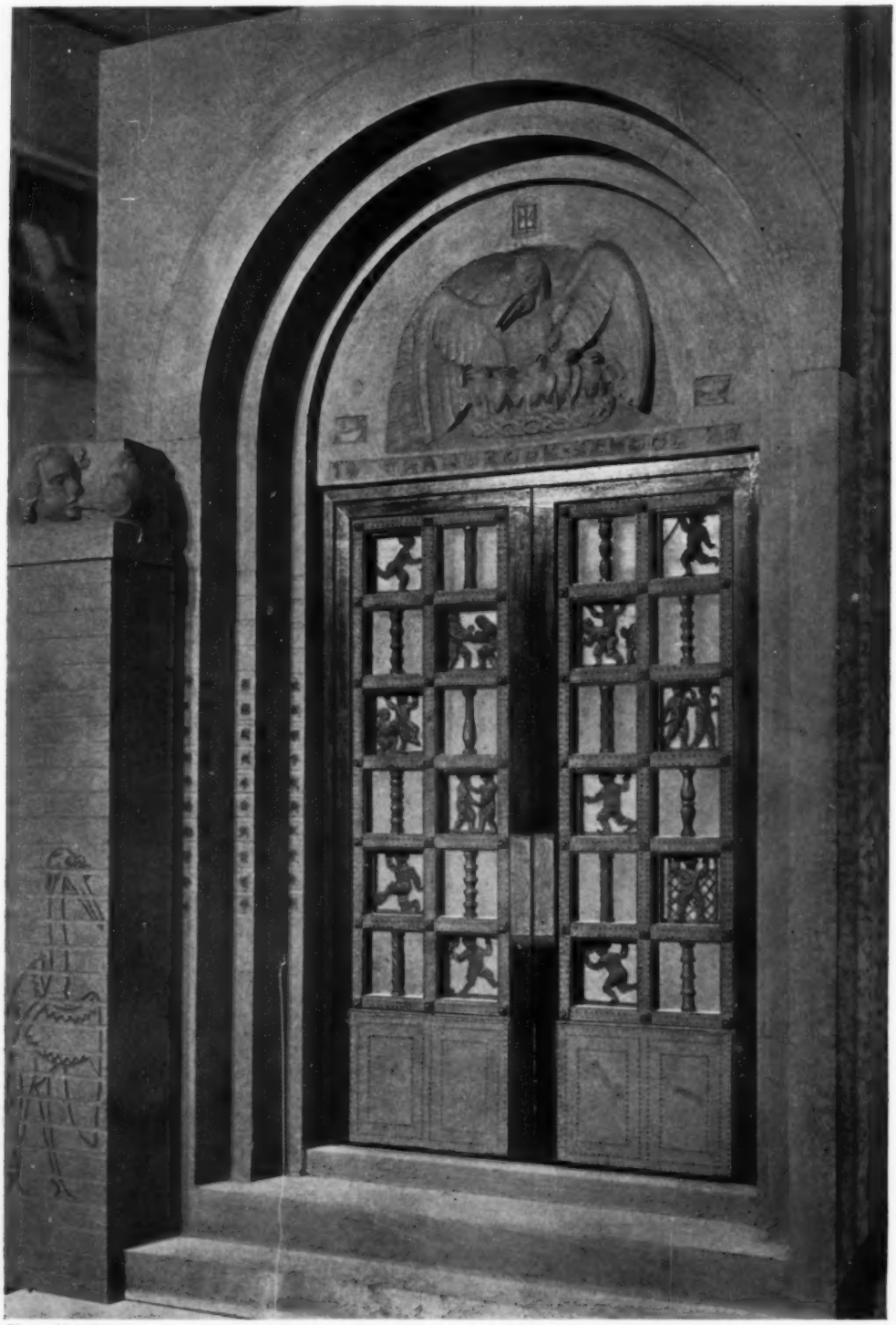
Photo, Nyholm

DETAIL OF IMPOST
CRANBROOK SCHOOL, BLOOMFIELD HILLS, MICHIGAN
ELIEL SAARINEN, ARCHITECT



Photo, Nyholm

DETAIL OF IMPOST
CRANBROOK SCHOOL, BLOOMFIELD HILLS, MICHIGAN
ELIEL SAARINEN, ARCHITECT



Photo, Nyholm

MODEL FOR DOOR
CRANBROOK SCHOOL, BLOOMFIELD HILLS, MICHIGAN
ELIEL SAARINEN, ARCHITECT
GEZA MAROTI, SCULPTOR

NOTES AND COMMENTS

DESIGN PATENTS FOR BUILDINGS

THE CONSTITUTION OF THE UNITED STATES provides that Congress shall have the power "to promote the progress of science and useful arts, by securing for limited times to authors and inventors the exclusive right to their respective writings and discoveries." A law was accordingly passed by Congress which provides that "any person who has invented any new, original, and ornamental design for an article of manufacture," etc., may obtain a patent therefor.

Many design patents have been issued by the Patent Office in accordance with this law for articles of manufacture. The Patent Office was, however, reluctant in granting design patents for buildings, on the ground that they were not articles of manufacture since they were not portable and were not commodities which could be put on sale on the market as a small detached unit. However, the Court of Appeals of the District of Columbia rendered a decision recently which should be of great importance to architects. In 1921 an application was filed in the Patent Office for a design patent for a grandstand. The Patent Office refused to grant a patent on the ground that a building was not patentable subject matter. The applicant thereupon appealed to the Court of Appeals which reversed the Patent Office decision and decreed that the applicant was entitled to a design patent for his grandstand. This, then, finally decided a question which had never before been satisfactorily answered. The essential feature of the design patent No. 73,499 consists in the fact that the outer edge of each side of the grandstand is bowed outwardly from the lines of the side seats as shown in Fig. 1, and is higher at the center and decreases in height towards the ends, being substantially elliptical in side elevation, as shown in Fig. 2. Fig. 1 is a plan view, Fig. 2 an elevation partly in section on the line 2—2 of Fig. 1, and Fig. 3 a perspective view, of a grandstand. The court held that size and immobility were factors which were not of any importance. It is the form of the structure as a whole which must be regarded. If the structure produces a design which is *new*, *original* and *ornamental*, then it is patentable.

The Examiner of Designs in the Patent Office commenting on this decision said that "in the design field such special structures as booths, amusement parks, gasoline filling stations and small portable and toy structures have been accorded patent protection as a matter of course if they met the requirements of novelty, invention and ornamentality. These were formerly granted on the theory that they were either portable or removable or simply elements of a building structure, and in any event not realty, and at some time existed as 'articles of manufacture' under R. S. 4929 within the restricted meaning then accorded that term. The exteriors of buildings, as such, had long been regarded as not patentable under the design section under the interpretation given in ex parte Lewis 54 O.G. 1890; 1891 C.D. 61. This held that complete buildings were realty and not 'manufactures', although many articles manufactured and sold with reference to ultimately becoming a part of a house were 'manufactures'."

"The immediate and specific effect of the decision is to overrule ex parte Lewis, and to change the Patent Office practice with respect to design applications, so that an application for a building may no longer be summarily rejected as not proper subject matter. It must be examined on its merits and be put to the usual tests as to novelty, invention, etc. In its broader aspect, as applied to patents generally, whether mechanical or design, for building structures, it adds one more precedent to the decisions holding buildings to be proper subject matter."

"It is believed that the esoteric reason behind the holdings that buildings were not proper subject matter lurked in the belief that a sufficient variety of practical and artistic structures would be evolved by people having merely the 'skill of the architect' without the stimulus of a patent monopoly; and that any wholesale grant of monopolies for structures upon mere differences in construction would only result in confusion and endless litigation and defeat its own purpose. In American Disappearing Bed Co. v. Arnaelsteen it was said that the skill of the architect or the product of that skill in the form of a building was not entitled to the protection of the patent laws."

"From a practical standpoint it is not believed that the grandstand decision will result in the filing of a flood of applications for plans or designs of dwelling houses. While each case would have to have a citation of appropriate art, and the Patent Office is not well supplied with views of houses, it can speedily acquire an abundance of such 'prior art references'. In each case it would be necessary that the alleged design meet the requirement of 'invention,' transcending the 'skill of the architect'. With respect to special structures there may be cases, as for example where corporations owning chain stores, desiring a store front which is distinctive, seek a monopoly on an alleged design which is no design at all. If distinctiveness is obtained merely by the use of gaudy paints, or a

particular type of lettering, they have not achieved the creative result from a design standpoint, which is indicative of patentable invention, however successful the markings are from a commercial angle in identifying the particular organization. If on the other hand a design has been created which has the elements of originality, beauty and invention, a monopoly should be granted regardless of whether the design may also serve to identify some particular organization. The only further requirement is that the article for which the design is submitted should be some complete, definite and tangible unitary article, recognized as such by the trade."

JOSEPH ROSSMAN

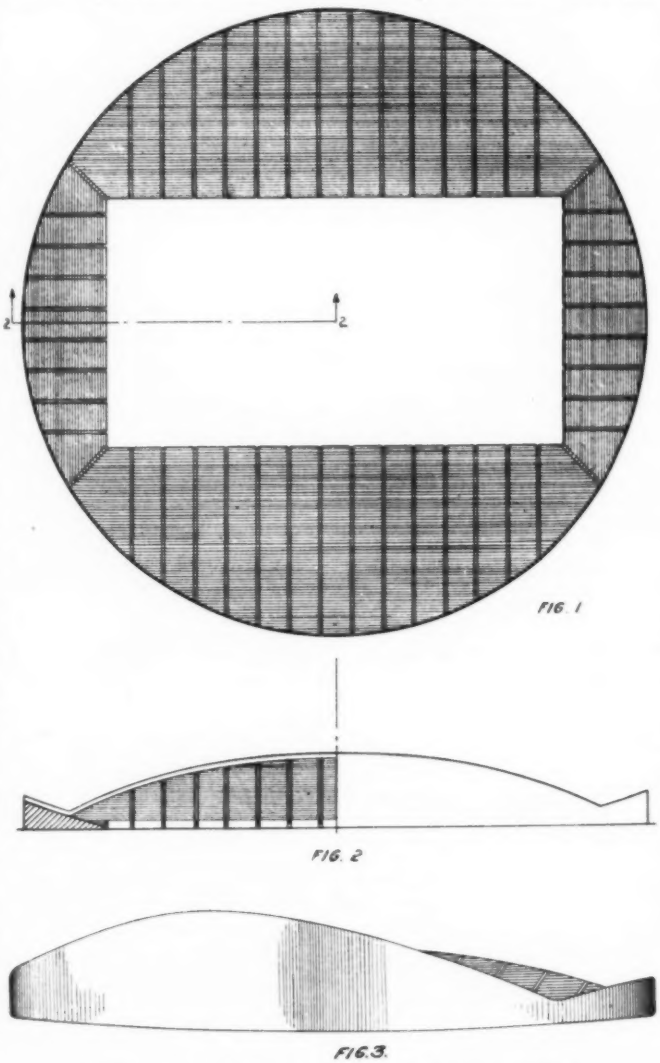


FIG. 1

FIG. 2

FIG. 3.

PATENT DESIGN No. 73,499—GRANDSTAND
GAVIN HADDEN, ENGINEER

DESTRUCTION

AMERICAN growth has been an expensive process for the remains of the past; but we have been buoyed by a tremendous optimism. Our past, it has been felt, offered nothing which could rightly stand in the way of our future. But in the last fifty years — perhaps even with a corresponding tempering of nineteenth century optimism—the vigor of wholesale destruction has been somewhat mitigated. It has been accepted that wherever possible monuments of the eighteenth century should be preserved. Even by a not altogether conscious process this reverence for the past has been extended to include the monuments of the early nineteenth century in which the classical tradition of the eighteenth century is still more or less continued. But reverence has its limits. In reality the monuments of the nineteenth century have too few loyal supporters to defend them. Destruction is not only not conscience-stricken but is accepted as even righteous.

Despite the modern Gothic splendors of Princeton and Yale, the Harvard Yard is felt, thanks to its several eighteenth century buildings, to preserve a value not rivaled elsewhere except in the very different University of Virginia. Even the later buildings, of which Matthews Hall is a rather horrible early attempt to achieve Collegiate Gothic, have by their temperance of scale not destroyed the note of Massachusetts and the other early halls. True it is that the Widener Library, whose enormous bulk may be functionally justified, makes in this all important matter of scale a jarring note. Now it has lately been proposed to destroy Appleton Chapel in order to replace it with a large Georgian War Memorial chapel.

Appleton Chapel was built in the middle of the nineteenth century in a style then presumed to be Romanesque. Its interior was somewhat later disfigured with wooden galleries in Eastlake Gothic. It is not therefore a building which the current sanctions of reverence may be expected naturally to protect. Optimism admittedly is not without cause in the feeling that, building for building, a modern chapel might be better. The building, quite adequate for its purpose, is in scale with the eighteenth century buildings. Its rather simple decoration is far less disharmonious than that of a building more successfully Romanesque in style would be. In summer when it is quite covered with vines only the rather pathetic spire reminds one that the builders' attempt was at odds with the old buildings in the other quadrangle of the yard. Furthermore even its

intention to be Romanesque prepares the eye for one of Richardson's masterpieces, Sever Hall, and is infinitely to be preferred to the modern classical buildings which make up the rest of the second quadrangle, so awkward is the adjustment of their traditional brick to their more Roman than eighteenth century scale.

But it is not the place here to discuss further the individual case. Rather is it desirable to point out that the limits to our present day architectural reverence are in large degree artificial and illogical. Outside the charmed circle of classical tradition it is popularly supposed in America that the virtues of antiquity do not exist. Only that which is emulated —with what cost to the development of a style of our own we are hardly aware—is held worthy of preservation. It might better be held that there is a general duty of reverence; that destruction should be avoided where possible lest our optimism have nothing whereby to justify itself. When the buildings of the eighteenth century were nearly all gone we set ourselves—perhaps even exaggeratedly—to preserve them, almost regardless of intrinsic worth. Let us start earlier to weigh the destruction of nineteenth century buildings with equal care and more aesthetic delicacy.

A real consideration of single cases such as the present will often prove that the twentieth century, with all its lip-service of reverence to the past, has done the monuments of the past more harm —as in the change of scale here mentioned—than did the nineteenth century. A study of the buildings of the very immediate past may prove as valuable in a negative way as a study of those of the further past is held to be in a positive way.

HENRY-RUSSELL HITCHCOCK, JR.

NEW LAMPS FOR OLD

AMONG the many problems facing architects, none is more worthy of careful thought than how to deal with our early buildings, how to preserve them not only from demolition but also from misleading restoration. If architects truly value the accrued beauty of early American architecture they cannot complacently accept as authentic or of genuine value, the "made over" and furbished building removed from an original and natural site and reerected on another one. Equally ingenuine and dull is that building erected to reproduce a destroyed seventeenth or eighteenth century college hall or group of houses built in our day to restore the atmosphere and semblance of a bygone village street. A restored building is not new and it is not old—it is a new building without originality, spirit or dignity.

Colonial architecture was a growth over a period of years, created when inconstant taste was other than our own. The imitation in our time of a building of a century or more ago, is sure to be an absurdity and as little like an original as an imitation landscape is like a real one.

Michie's Tavern in Virginia is an instance of a building removed from its original setting and rebuilt on a new location. It was originally built almost two centuries ago beyond the present town of Charlottesville, in a rural district seldom visited by the auto tourist. It has now been demolished and re-erected on a main highway that attracts thousands of visitors to Monticello, the shrine of Thomas Jefferson. "It was felt," we are told, "that the whole house and its contents were so interesting that it was worth while moving them from their unfrequented site to a place where they could be more easily visited."[!]

We are elsewhere informed of the restoration of the old William and Mary College at Williamsburg, Virginia, as well as the town, with funds contributed by John D. Rockefeller, Jr. Much of the brick for the undertaking, it is pointed out, will be the old brick rescued from old buildings throughout the State. It is unnecessary to mention the deplorable procedure of sacrificing the exquisite beauty of untouched brickwork and weathered walls. It is known to the careful observer that brick-work acquires certain delicately blended colors by time, that the sun bleaches the southern surfaces and that lichens spread their graceful patches and that all of this vanishes in the process of tearing down and utterly destroys the original atmosphere which no skill can reproduce. The rebuilt and repointed wall or chimney retains nothing whatever of interest except the interest of a copy—an archaeological study.

Herein lies the real horror of restoration. Old houses untouched by alteration ought to mean something to us and we owe it to future generations, not lightly to change or deface them.

INDEX TO THE ARCHITECTURAL RECORD

THE SEMI-ANNUAL INDEX to The Architectural Record that accompanied the June issue and is continued in the present number, was prepared with a listing of items in direct alphabetical order. This simple arrangement, with the exhaustive inclusion of page references to architects, authors, buildings and subjects presented, it is believed will be an aid to architects and librarians in rapidly and effectively tracing down material that appeared in issues of this magazine during the year.

The index system adopted was arrived at after study in collaboration with editors of the other architectural journals published in New York. Perfection is not claimed for it, nor are our efforts to improve our indexing method at an end. We hope to profit further by the suggestions of our readers.

THE ARCHITECT'S LIBRARY

BOOK REVIEWS

HOUSES OF THE WREN AND EARLY GEORGIAN PERIODS

TRUNSTAN SMALL AND CHRISTOPHER WOODBRIDGE.

Houses of the Wren and Early Georgian Periods. Introduction by William G. Newton. Folio. Helburn. $10.00.

THE EARLIER eighteenth century seems to our peaceful retrospection a placid, contented and comfortable period, formal and artificial in manner but untroubled by our complexities of spirit, the "age of reason," unromantic, unemotional. Historically its behavior did not follow those lines with any consistency. It was full of wars and disasters and radical ideas, of injustice, and discontent, of vigor and violence. The greatest literary genius of the first quarter of the century was the most savage of all English satirists, the chief poet of the second was a "poison-penned" cripple, the great arbiter of letters in the third was fundamentally melancholy and more or less superstitious.

But architecture tends to walk with a more even pace than most arts. There may be a mystical something in the sight of Wren's dusky dome floating on London's November fog, but in general the building of Wren, and the Georgians after him, gives the impression of a calm, reasonable state of mind. It seems to represent the eighteenth century of our peaceful retrospection. The clamor of the age has died away and there remains "the gracious and substantial tranquillity of panelled room and carved staircase, of ordered sash and mellow brick, of houses gently bred that give distinction wherever they are found—the quintessence of domesticity." It may be that the differences between that period, architecturally so represented, and our own, is what peculiarly attracts us. "The sober gravity, the sense of breadth and substance soothes our impatience. A salient difference between that generation and our own is that their England was rural with a hankering for the town; whereas now it is urban with a hankering for the country. . . These charming houses seem to us an outcome of a more desirable life than our own, when the news of the world's disasters was not brought daily to the breakfast table . . . They are admirably and simply planned, essentially as a house should be, habitable and adorning." They attract us too through our feeling of kinship with the ordinary run of our ancestors. "They are like wagons and barns, the masterpieces of the common man, working with the assurance of a tradition handed down the generations from father to son."

THE BARONS, REIGATE, SURREY
From *Houses of the Wren and Early Georgian Periods*

These remarks in Mr. Newton's Introduction are nearly as applicable to American Colonial as to English Georgian, for the two are substantially the same. Colonial builders brought over the same tradition and used the same books of designs. The early eighteenth century in England was richer than the later part in the qualities we look upon as characteristic, and "Sir Christopher Wren was the overshadowing figure. He gave the English touch to the work of the Renaissance," and legions of skilled carpenters, joiners, masons and bricklayers carried on the tradition after he was dead. Mr. Newton implies it was the Wren tradition which they carried on.

The volume before us is largely made of photographs, general and detailed, and measured drawings. There seems to be more ornamental work on the staircases of Georgian houses than perhaps anywhere else. The contrast between rich carving of the balustrades and the cool spaces of the nearby paneling is very noticeable. Another contrast is outside, between the sober brick walls with plain rectangular windows and the delicately designed white door-

ways. In some houses however (such as Ormley Lodge, pp. 73-83, Rainham Hall, pp. 117-126, and St. Anselm's School, pp. 33-45) they are slightly arched, an interesting variation from the entrance. The amount of ironwork and its wealth of design, especially in the gateways, is notable.

Volume 5 of Tipping's English Homes covers the same early Georgian period, but Tipping's is an expensive work which has already reached seven volumes, gives no measured drawings and is devoted largely to the more stately and famous country seats. Mr. Tipping seems to differ from Mr. Newton about this "Wren tradition."

It has by someone been asserted that the discovery of the manuscript of Vitruvius was disastrous to Renaissance architecture, smothered its natural developments, and bound it down to formula and antiquity. English architecture was perhaps favored by distance. "Inigo Jones mastered the classic manner while in Italy but he gave it a strong native and individual flavor when he practised it in England." Wren had little previous study of architecture, no apprenticeship and almost no foreign travel. He was a mathematician, suddenly thrust into practice and had to learn as he went on. London was burnt; Wren was an extraordinary person, and the king favored him. His opportunity was great, and he rose to it, but there was something of the comet in his career. The circumstance tended to make him an innovator, but fortunately there was only one dominant style. It was in the flesh and blood of every designer and builder. The very breathing of its air was training and discipline to a brain as well balanced and receptive as Wren's. But there was no "school of Wren."

A school arose, however, composed of "great lords and humble practitioners," and Palladio was the schoolmaster, out of the loins of Vitruvius. Inigo Jones used Palladio as much or as little as he chose. Wren was a general believer in classicism but he subscribed to no thirty-nine articles of pure Palladianism. Hence he was belittled and ignored by the rich and titled and by the diligent professionals who grouped themselves around Lord Burlington after his return from Italy about 1716. Burlington came home full of Palladian zeal. How much he really knew, or accomplished himself in architecture, is of course dubious, but of the influence of his zeal there seems to be no doubt. Palladio and Jones were the seers worshipped by the Burlington school. Most of its members had sojourned in Italy, but the decadent phase of its architecture they largely escaped, by the aid of their pure classicism. Perhaps also it was because they were English, and perhaps Wren had something to do with it. At any rate, though Mr. Tipping thinks Wren the greatest genius in English architecture, he does not find any school of the followers of Wren among the Georgians. The most distinct school was anti-Wren. The great houses of the period, however, were more Palladian than the smaller domestic architecture. The former felt more the influence of the Burlington school; whereas the latter followed the Anglicized classic tradition, which Wren himself had followed.

ARTHUR W. COLTON

"SCIENTIFIC PREDETERMINATION" IN HOTEL PLANNING

TAYLOR, C. STANLEY AND VINCENT R. BLISS, Eds.

Hotel Planning and Outfitting. Chicago: Albert Pick & Co., 1928. 1st ed. 438 pp. Ill. 9x11⅞ in. Cloth, $10.00.

THE EDITORS of this very workmanlike and comprehensive treatise—who, by the way, had as contributors and consultants Alexander B. Trowbridge and Harry Prince, consulting architects, and Horwath & Horwath, hotel accountants—in the words "scientific predetermination" hit upon a happy phrase to express the underlying basis of their work.

Too many hotel projects in the past have either gone on the rocks or are failing to do more than just break even owing to the lack of accurate and complete information on the thousand and one factors which influence and control success in this highly specialized field of building. This book is not only the first of its type that has been published, but it immediately commends itself by the amount and practical nature of the statistical information given, all of it based on jobs actually constructed and now in operation, and most of it, in addition, reduced to averages which may be applied very practically to projected construction.

The sub-title well summarizes the book—"A Compilation of Authoritative Information on Problems of Hotel Economics, Architecture, Plans, Food Service Engineering, Furnishing and General Outfitting, etc." Plans are given of the key floors of ninety-four hotels, none of them so large as to be exceptional or abnormal in plan or equipment, and none of them very small. The plans are accompanied by well chosen exterior views shown in halftone, and the types are very logically divided into three kinds that are distinct in function—the Commercial, Apartment and Resort Hotel.

The section on Food Service Planning contains much tabulated material not available in collected form elsewhere. Architects will be specially interested in Mr. Trowbridge's table headed "A Recommended Method for Analyzing Hotel Plans" and also in such other informative tabulated data as "Estimated Annual Operating Expenses," "Productive Steps in Ten Hotels," "Efficiency Planning for Increasing Rentals," and "Architectural Engineering Problems in Hotel Food Service Planning."

ARCHITECTURE

A. L. N. Russell.

Architecture. E. P. Dutton & Co. $3.00.

Ingenious, personal and picturesque, like English architecture itself, when at its best, this short history of architecture is as amusing as a novel. Brief and to the point, it contains at once humor, as when the author uses the word "gadget," and an ingratiating charm of style that warms the heart to our way of imparting information in English. And for the American reader the book is full of those amusing little indications of the eternal feud existing between our great Mother and ourselves over trifles.

The author bases his critical views upon the sound gospel of fitness and that form in good work is the outgrowth of function expressed. Being a history of architecture by a British author, the book tends somewhat naturally to dilate upon British architecture perhaps at the expense of other developments equally if not more important in the long run. Efforts to describe and estimate English architecture are on the whole rarely successful, perhaps because English architecture comes nearer to being literature, having always a literary rather than a deeply structural meaning. Shakespeare, the national genius, was not an architect. If the English cathedrals are not less famous than the French it is because of a charm one feels only in their presence, while the French excite and animate the logical centres of the mind. No amount of explanation will ever account for the English renaissance. There is pathos in this for within my knowledge, it is to the Greeks alone that the English have ever bowed their heads. There is consolation in this only in the fact that Greek antiquity is included in that realm upon which the sun never sets. That chapter of the book Mr. Russell devotes to the Greeks is perhaps for this reason the best epitome of a period contained in the book. The end of the chapter is from the lips of Pericles himself and then in the succeeding chapter we read "Greece was the clear mountain spring, but Rome served as the irrigation system distributing its waters far and wide; and if they lost something of their crystal purity in the process and acquired a slight taste of the pipes (that is Rome), yet the work of distribution was no less essential and valuable." Did Rome distribute Greece then? I should like to hazard the thought that in distributing the arch and the dome, which she herself patented, Rome gave more to architectural development than even the Greeks. Today, having sighed our last over the imperishable Greek orders we are, however, still forced in our most modern efforts to deal with dome and arch.

Mr. Russell's work is a comfort to those of us who are beginning to have a feeling that the renaissance in architecture was a beautiful disaster. The author writes a charming chapter on "Italy and the Renaissance," one which Browning and Symonds would applaud, but points out the pitfalls and difficulties in the situation in a way both fair and logical. Next to Greece perhaps the British have enjoyed most their Italian renaissance, there on those foggy, seabound isles. The author quotes "Bliss was it in that dawn to be alive but to be young was very Heaven!" as the British have ever seen Italy through the mist with a shiver, wistfully.

In treating of modern work, writing history as yet unwritten, Mr. Russell, speaking of the origins of the so-called modernistic movement, says, "Nothing we have produced (meaning the English) so far seems to suggest that our own country is likely to lead the way." And then in a later chapter, "We shall decide that more than anywhere else the original influences are to be found in the German architecture of the period immediately before the war." It is interesting to speculate as to where it all came from and in the matter of its present appearance the Modernist style may be predominantly German. But one must bear in mind that what there is of this style guaranteeable as such, is the direct outgrowth of machine industry, and the first man to attempt an adjustment between machine and designer was William Morris, an Englishman. The modern era is seriously considered here, even suggesting the fact that ere long writers on architecture will include two or three necessary chapters on the classic styles and Gothic and then discuss our fascinating modern day. One must congratulate Mr. Russell on what he has accomplished in this respect, in presenting a book for beginners which both delightfully instructs and leaves the mind open and expectant. I shall quote, in closing, the last paragraph in the book. "The more we know about the architecture of other days, the better fitted we shall be to hold the balance between respect for our great inheritance of tradition and the desire for fresh growth and new adventure."

Edwin Avery Park

ENGLISH LANDSCAPE ARCHITECTURE

Mawson, Thomas A.,

The Life Work of an English Landscape Architect. An autobiography. Scribner's, New York. $7.50.

An important personal record of one of England's notable group of landscape architects. To Thomas A. Mawson is due, in no small degree, the revival during the period of his life of intelligent and scholarly garden design and city planning.

The greater part of his work was done in England. American readers will be attracted to his reminiscences dealing with his visits to America where he lectured at Columbia, Harvard, Michigan, Illinois and Toronto Universities.

LIST OF NEW BOOKS ON ARCHITECTURE AND THE ALLIED ARTS

COMPILED BY

PAULINE V. FULLERTON

LIBRARIAN IN CHARGE OF THE DIVISION OF ART AND ARCHITECTURE, THE NEW YORK PUBLIC LIBRARY

ARCHITECTURE

Academy architecture and architectural review. London: Academy architecture, 1928. various paging. 4°. 10s. 6d. 720.5

Founded as an annual in 1889, this series of plates and plans illustrating current British architectural work is now issued twice a year.

ALP, EMMA.

Die Kapitelle des XII. Jahrhunderts im Entstehungsgebiete der Gotik. Detmold: Meyer, 1927. 77 pl. on 21 l. 8°. 6 marks. 729.32

Bibliography, p. 75.

A specialized study of the Gothic capital, based mainly upon French forms.

AZEMA, LÉON.

Documents d'architecture contemporaine. Paris: A. Vincent & Cie., 1927-1928. Series 1-2. 54 plates in each series. f°. 135 fr. per vol. 724.9

A series of plates, without comment, showing examples of various buildings such as theatres, hotels, apartments, and churches. Includes a few examples from Belgium and the Millinery Center Building in New York.

BARBOTIN, JACQUES.

L'habitation flamande. Paris: C. Massin & Cie., 1927. 9 p. 40 pl. (incl. plans.) f°. (Collection de l'art régional en France.) 75 fr. 728

Illustrated title page.

The introduction outlines the characteristics of Flemish architecture. The plates show some few examples of old houses, but illustrate mainly modern adaptations of this regional type, both in French and Belgian Flanders.

BOYS, THOMAS SHOTTER.

"*Picturesque architecture in Paris, Ghent, Antwerp, Rouen, etc.;* drawn from nature on stone by Thomas Shotter Boys, 1839"; a re-issue of the complete set of these exceedingly scarce and beautiful delineations of continental cities, printed in colors, with descriptive notes to each plate, and an introduction by E. Beresford Chancellor. London: The Architectural Press, 1928. xvi, 114 p. incl. col'd plates. illus. (facsim.) f°. 60s. 720.84

The letter press of the original edition is retained in part, with additional notes by the present editor. The plates are charming architectural renderings through the medium of the colored lithograph.

BRYAN, JOHN ALBURY.

Missouri's contribution to American architecture; a history of the architectural achievements in this state from the time of the earliest settlements down to the present year. Compiled and edited by John Albury Bryan. St. Louis, Mo., 1928. 2, 368 p. incl. illus. f°. $5.00. 720.973

A chronological history, under five period groupings, serves to introduce the work of many local architects; and the illustrations form an interesting pictorial record of changes in American architectural style.

CHAMBERLAIN, SAMUEL.

Domestic architecture in rural France; sketches in lithograph, dry point, pencil and wash, of small chateaux, farms, town houses, cottages, manoirs, windmills, gates, doorways, details, etc., from Burgundy, Auvergne, Provence, Normandy, Brittany and the Touraine. New York: Architectural Book Pub. Co., 1928. vii p. front., 55 pl. f°. $12.50. 728

Characteristic aspects of French provincial architecture are rendered with sensitiveness and charm.

Le chiese di Bologna illustrate con cenni sulle tradizioni religiose della città. Bologna: N. Zanichelli, 1927. xiii, 183 p. illus. 16°. 13.50 lire. 726.5

"Pubblicato in occasione del Congresso eucaristico nazionale tenuto a Bologna dal 6 al 12 settembre 1927."

A detailed guide to some seventy-five churches in this Italian city, with small half-tone illustrations.

DEUTSCHER, WERKBUND.

Bau und Wohnung. Stuttgart: Akad. Verlag. Dr. F. Wedekind & Co., 1927. 152 p. illus., plans. f°. 7.20 marks. 708.31

Plates and descriptive text illustrating the Stuttgart exposition of 1927. The plates show plans, exteriors and interiors designed by notable contributors.

FIELD, HORACE, AND M. BUNNEY.

English domestic architecture of the XVII and XVIII centuries; a selection of examples of smaller buildings measured, drawn and photographed. London: G. Bell and Sons, Ltd., 1928. viii, 183 p. incl. plates. diagrs., illus. (incl. plans.) 2 ed., rev. sq. 4°. 18s. 728

First published in 1905. This 1928 edition has unchanged text, but a re-arrangement of illustrations to bring together plates and the text relating to them.

HOFF, AUGUST.

Emil Fahrenkamp, ein Ausschnitt seines Schaffens aus den Jahren 1924-1927. Stuttgart: J. Hoffmann, 1928. 96 p. col'd front., illus. (incl. plans), 5 col'd pl. 4°. 25 marks. 724.931

The brief text is followed by a series of illustrations of the work of this German architect drawn from photographs, drawings, plans and watercolors.

NORMAND, CHARLES PIERRE JOSEPH.

A parallel of the orders of architecture, Greek and Roman. London: J. Tiranti & Co., 1928. 4 l. 64 pl. f°. 6s. 729.323

Consists of a brief text translated from the French, and a series of line engravings reprinted from the original Paris edition of 1819.

Petits édifices. Série 2, 3 et 4. Paris: A. Vincent et Cie., 1927-1928. 125 fr. per vol. 724

Series 2 and 3 deal with half timbered buildings in Normandy; series 4 with rural buildings in Provence. Each portfolio has a short introduction, a list of plates with descriptive notes, eight pencil drawings by Augustin Bernard and a series of 48 other plates which are reproductions of photographs. The first series, 1926, dealt with Spain.

RITOW, HERMAN, AND F. C. BROWN.

Architectural design and lettering; a practical treatise on the construction and design of modern dwellings. Chicago: American technical society, 1928. 223 p. illus. 8°. $2.00. 729

A handbook of the processes involved in architectural design, planning and construction. The second section on architectural drawing and lettering is a reprint.

ROBERTSON, HOWARD, AND F. R. YERBURY, editors.

Examples of modern French architecture. London: E. Benn, Ltd., 1928. 7 p. 100 pl. 4°. 32s. 6d. 724.94

"A volume of photographic impressions of modern French work, an architectural traveller's record of buildings and details . . . work which will be universally admitted as sanely evolutionary in character, side by side with work which is frankly revolutionary." —Introduction.

SALWEY, JASPER PHILIP.

Lincoln; a sketch-book. London: A. & C. Black, Ltd., 1928. 24 l. incl. plates. 8°. (Artists' sketch book series.) 2s. 6d. 720.942

Illustrated title page.

A series of pencil sketches without text, illustrating the architecture of Lincoln, England. Another volume in the same series by H. P. Templar is a similar study of the city of Manchester.

U. S. Public Buildings and Public Parks of the National Capital, office of. The Lincoln Memorial, Washington. Prepared under the direction of the Director of Public Buildings and Public Parks by Edward F. Concklin, special assistant. Washington: United States Government Printing Office, 1927. vi, 94 p. front., plates. f°. $2.00. 725

Sketches the inception and history of the Lincoln Memorial, and describes the architecture, decoration, setting, dedication and administration.

ALLIED ARTS

AJALBERT, JEAN.

Beauvais. Paris: A. Morancé, 1927. 72 p. incl. table. plates. 12°. 20 fr. 746

A concise history of the Beauvais tapestry works, and a record of production, brought up to date by the present director of this state activity.

CHAMBERS, FRANK F.

Cycles of taste; an unacknowledged problem in ancient art and criticism. Cambridge: Harvard University Press, 1928. vi, 139 p. 8°. $2.00. 701

Greek and Roman aesthetics studied from the evidence of ancient literature rather than from the comment and interpretation of later critics.

Decorative art, 1928: "The Studio" Yearbook. Edited by C. Geoffrey Holme and Shirley B. Wainwright. London: The Studio, 1928. viii, 188 p. illus. (part col'd), plans. 4°. 10s. 6d. 740

A review of American, British and continental examples of the year's activity in the design of architecture, furniture, pottery, glassware, metal-work and textiles.

DESMAROUX, HÉLÈNE.

L'oeuvre du sculpteur O'Connor. Paris: Librairie de France, 1927. 120 p. illus. 4°. 60 fr. 735

A French appreciation of the Celtic qualities in the art of the American sculptor O'Connor. Volume contains 115 half-tone reproductions of his work.

El Arte en España. Bajo el patronato de la Comisaría regia del turismo y cultura artística. Barcelona: Hijos de J. Thomas, 1927-1928. 16°. 2 pesetas per vol. 709.461

No. 20. Aguilar y Cuadrado, R. La catedral de Sigüenza. 1927.
No. 21. Tormo y Monzó, E. Ribera. 1927.
No. 22. Melida, J. R. Escorial. 1928.
No. 23. Gascon de Gotor, A. Zaragoza. 1928.
No. 24. Gascón de Gotor, A. Zaragoza II. 1928.
No. 25. Polo Benito, J. La catedral de Toledo. 1928.
A series of small monographs on individual Spanish cities, buildings or artists.

GLEICHEN, LORD EDWARD.

London's open-air statuary. London: Longmans, Green and Co., Ltd., 1928. xlv, 258 p. incl. tables. front., plates. 8°. 21s. 735

Bibliography, p. 236-239.

A record of some 400 examples of London sculpture, arranged by certain district groupings. There are 45 illustrations and a good index.

HANNAN, THOMAS.

Famous Scottish houses; the Lowlands. London: A. & C. Black, Ltd., 1928. viii, 204 p. front., plates. 8°. 12s. 6d. 728

Bibliography, p. 201.

Historical and architectural descriptions of some 50 Scottish houses, with clear photogravure illustrations from the author's own photographs.

HENRIOT, EMILE.

En Provence; crayons et sépias de Maurice de Lambert. Paris: L. Delteil, 1927. 180 p. incl. mounted front., mounted plates. mounted illus. f°. 350 fr. 720.944

1233 copies only, printed.

Delightful rendering by word and picture of the charm of houses and gardens of old Provence, especially at Avignon, Nimes, Arles and Aix.

JACKMAN, RILLA EVELYN.

American arts. Illustrated with four hundred sixty halftones from photographs and five line drawings. New York: Rand McNally & Co., 1928. xxxiii, 561 p. 248 plates. 8°. $3.60. 709.73

A general survey of the various fields of American art;—the crafts and industries, painting, sculpture, and architecture. Illustrations are small half-tones.

LONDON COUNTY COUNCIL.

Housing: with particular reference to post-war housing schemes. London: London County Council, 1928. 193 p. incl. tables. front., illus., plans. 8°. 2s. 6d. 728.1

This volume includes a "summary of the information to be found in fuller detail in two earlier volumes already published by the Council. The present volume thus gives a complete history of the housing question in London." Includes its legislative, financial and architectural aspects.

FOREIGN PERIODICALS

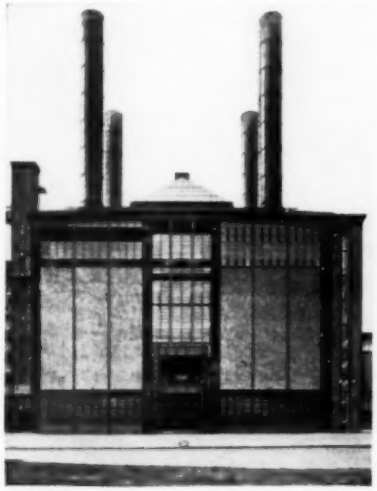
Reviewed by Henry-Russell Hitchcock, Jr.

IN THE periodicals received in the last two months there are several items of importance. The French magazines illustrate a scheme for solving city traffic problems by separate sidewalks and roads on different levels, and also include a rather excellent group of schools.

The British and Spanish magazines are more successful in publishing good non-traditional Dutch work than in showing similar work in their own countries, although the advertisements prove its existence. But the British and Italian traditional designs show a vigor in the use of the Baroque that is infrequent in America.

Only government buildings seem to resist the general movement toward the reinforced concrete style introduced by Gropius. They cling to the graces of eclecticism and continue the masterly use of elaborate and attractively patterned brickwork. Elsewhere, in industrial building, brick is used more simply as a colorful substitute for concrete with as much success as in the richer building of some years ago.

But all the articles and illustrations in the periodicals of these last two months are not devoted to the present. *The Architect's Journal* presents admirably the work of Ludwig Persius, a royal Prussian architect of the mid-nineteenth century at Potsdam. His



POWER STATION NEAR BERLIN
KLINGENBERG AND ISSEL, ARCHITECTS
From *Baukunst*, July, 1928

GYMNASIUM AT SURESNES
PAYRET-DORTAIL, ARCHITECT
From *L'Architecte*, July, 1928

POWER STATION, DERBY
From *The Architect & Building News*
August 24, 1928

The German magazines as usual have the largest group of interesting modern buildings to offer. The competition designs, the workers' housing developments, the city buildings, the interiors, the expositions—all illustrate a continual gradual shift toward the left. It is pleasant to note that the apartments in Los Angeles by Neutra illustrated in *Die Baugilde* are quite as fine and as modern as any of this German work. The immense building programme of the city of Frankfurt in the last few years is frequently illustrated. *Das Neue Frankfurt* gives in addition an elaborate account with full technical details both as regards the city planning involved and the equipment of the single apartments. Large scale domestic building of another sort is illustrated in the Gagfah housing exposition at Berlin with small single houses, double houses, and rows of houses by many of the leading architects of Germany.

work is without question the most satisfactory of the middle period of Romanticism and there is little comparable to it in Anglo-Saxon countries, although many familiar types, such as the "Italian Villa," are represented in it. Another greater and earlier German, Johann Balthasar Neumann is discussed in the *Zeitschrift für Bauwesen*. His work is perhaps the finest of the eighteenth century Baroque-Rococo style; but it has less direct connection with modern architecture than the work of Persius.

Most of the text in the periodicals is of less interest than the illustrations. It is more concerned with local conditions, particularly that contained in the weeklies.

In the fields of gardening and decoration the Germans in general are very skilful in working close to architecture and their ideals of comfort and homelikeness are nearer to ours in America than are those

TERRACE OF A RESIDENCE AT BOULOGNE-SUR-SEINE. M. R. FISCHER, ARCHITECT
From *La Construction Moderne*, July 29, 1928

of the French or even of the English. It is regrettable that the contacts of American architects interested in current design have been almost solely with France. It may be hoped that in time the excellent foreign periodicals may make other work better known in this country.

Since the War few large country houses have been built in Europe as those who can afford them usually prefer old châteaux and manor houses. Those that are illustrated in the foreign periodicals resemble rather closely the country houses in America. French examples are markedly inferior to our own in plan and in execution. Some of the larger suburban villas in Germany and France which are comparable in size to the smaller American country houses have indeed shown an advance in treatment but the real problem of the house in the country is one which little concerns the European architect of today. It is a field in which we may well look for continued fine expression in America and no doubt within a short time there will be here greater freedom and less dependence on tradition. Nonetheless the suburban villas of plain brickwork and reinforced concrete and glass, of which the periodicals reviewed here contain several excellent examples, have more suggestions to offer in this field naturally than industrial building or the large housing developments. At the same time the British traditional work sets a standard of dignified simplicity and excellent craftsmanship which America, despite the advances of the last few years, may still study with profit.

CANADA:

The Journal, Royal Architectural Institute of Canada. August. The early architecture of the Province of Ontario. The Old English Inn.

ENGLAND:

The Architect's Journal. July 25. Ludwig Persius and the Romantic Age in Germany. August 1. Hudson's Bay House by Merves and Davis. August 8. Fascist headquarters in Milan and Bergamo. August 29. An article on Oskar Kaufmann. Architectural Designs exhibited at London University. Modern power stations in Italy and in England. September 5. A fine modern English factory (in an advertisement). September 12. Fritz Lang's architectural settings used in German movies.

The Architect and Building News. August 24. The Lydia House, Amsterdam, by Boterenbrood. August 31. The Church of the Sagrada Famiglia in Barcelona by J. Gaudi. September 7. A church at Wimbledon by A. Gilbert Scott. Gordon Craig's stage-settings and modern architecture. Some French War Memorials. September 14. Lewisham Townhall competition. New buildings in Mayfair. Modern garages in Paris.

FINLAND:

Arkkitehti. August 1928. New Apartment houses in Helsingfors. Competition designs for a bank and office building.

FRANCE:

L'Architecte. July. Notice of the death of Charles Plumet, one of the earliest important modern architects in France. School buildings at Suresnes by Payret-Dortail.*

La Construction Moderne. July 22. Project by André Ventre for separating pedestrians from traffic in crowded urban centers. New shop fronts in Paris. July 29. A villa at St. Cloud by Crevel and one at Boulogne by Fischer.* August 26. The results of the Dutch popular housing law. Buildings by the Amsterdam Office of Public Works. September 2. A very full study of the Pleyel building in Paris by Auburtin, Granet and Mathon.

GERMANY:

Baukunst. June. Domestic work by John Campbell. Note on the return of Walter Gropius to private practice. July. Five centuries of architects' sketches. A large power station outside Berlin by Klingenberg and Issel.*

Bauwelt. July 26. Apartments in Leipzig by Albrecht Jaeger. August 23. Exposition of small house design at Gagfah near Berlin. Single houses, groups of houses by Schmitthenner, Emmerich, and Mebes, Tessemow, Poelzig, Klein, and others. A fine resumé of the simplest and cheapest type of domestic building as today practised in Germany. August 30. A small country house outside Berlin by Bruno Ahrends. September 6. A small country house outside Hamburg by Block and Hochfeld.

Das Neue Frankfurt. July-August. The Frankfurt housing developments.

Denkmalpflege und Heimatschutz. July. Renaissance architecture in Koblenz and Haynau. August and September. New building in relation to old cities.

Die Baugilde. July 25. School at Essen by E. G. Korner. Apartment buildings by R. J. Neutra in Los Angeles. Small dwelling plans at the Munich Exposition of 1928. Paris Housing Congress of 1928. August 25. New Apartments at Frankfurt by Rudloff and May. Hotels and Houses by Helmut von Wagner-Freynsheim. The rebuilding of the devastated regions in East Prussia. Modern tombstones.

Die Kunst. August. Stuttgart Domestic architecture by Albert Eitel. Ironwork by Albert Grenander. Bremen Gardens by Fr. Gildemeister.

Moderne Bauformen. August. Modern Viennese Interiors. A one room apartment by Fritz Grosz. Interiors at the 1928 Dusseldorf Exposition. The newest Czech buildings. Fahrenkamp's designs for the Bremen Exposition. September. A summary of the book "Die Neue Baukunst in Deutschland" by Hugo Häring. Works by Behrens, Poelzig. Tessenow, Mendelsohn, Luckhardt and Anker, Gropius, Max and Bruno, Taut, Häring, Hilberseimer, May and Rudloff, Döcker, Korn, Bartning, Adolf Meyer, Haessler, Krayl, Schneider, Rading, and Scharoun. A fine pictorial resumé of the best of the most advanced architecture of Germany in the last few years.

Wasmuths' Monatshefte fur Baukunst. August. Contemporary German architecture by Robert Atkinson. Work of Max Laenger. Competition for Spa at Bad Neuenahr. New Spanish houses in California. September. The Buildings of the Press Fair in Cologne by Adolf Abel. Titaifna-Palast Cinema in Berlin by Schöffler, Schloenbach and Jacobi. Modern French building. Nineteenth century engineering architecture. The contrast between the extreme expressionistic architecture of Hoetger in Bremen and the more rational architecture of Mendelsohn.

Zeitschrift für Bauwesen. June. The work of Johann Balthasar Neumaun. July. A full account of the remodelling of the Berlin Opera house.

Zentralblatt der Bauverwaltung. July 25. Competition for a Spa at Norderney. August 1. A new school in Koenigsberg. September 5. Improvement of lecture rooms in the Berlin Technical Schools. Munich and Dresden Expositions of architecture and technics. September 12. Modern German parks and gardens.

SPAIN:

Arquitectura. August. Restoration of ancient buildings in Holland and Belgium. A workers' school at Bernau by Hannes Mayer. A theatre in the Canary Islands.

From *Baukunst*, June, 1928

* *Illustrated in these pages.*

Church Sani-Black installation in apartment at 18 Gramercy Park, New York City

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NOTES IN BRIEF

HARVARD TO BUILD SMALL COLLEGES

In an attempt to decentralize higher education Harvard College is to be divided into a number of small colleges after the pattern of English Universities. There are to be several independent collegiate and social units to be designated as "houses" and if the experimental plan proves successful it is predicted that other campuses will soon reflect the influence of this revolutionary proposal in collegiate planning.

The smaller college, according to President A. Lawrence Lowell, is intended to receive the advantages of the large and small institution. Dormitories, dining halls and common rooms will accommodate from two hundred to three hundred students. The existing colleges will be made separate educational units, but at the same time, Harvard College proper will be responsible for the administration of the entire group.

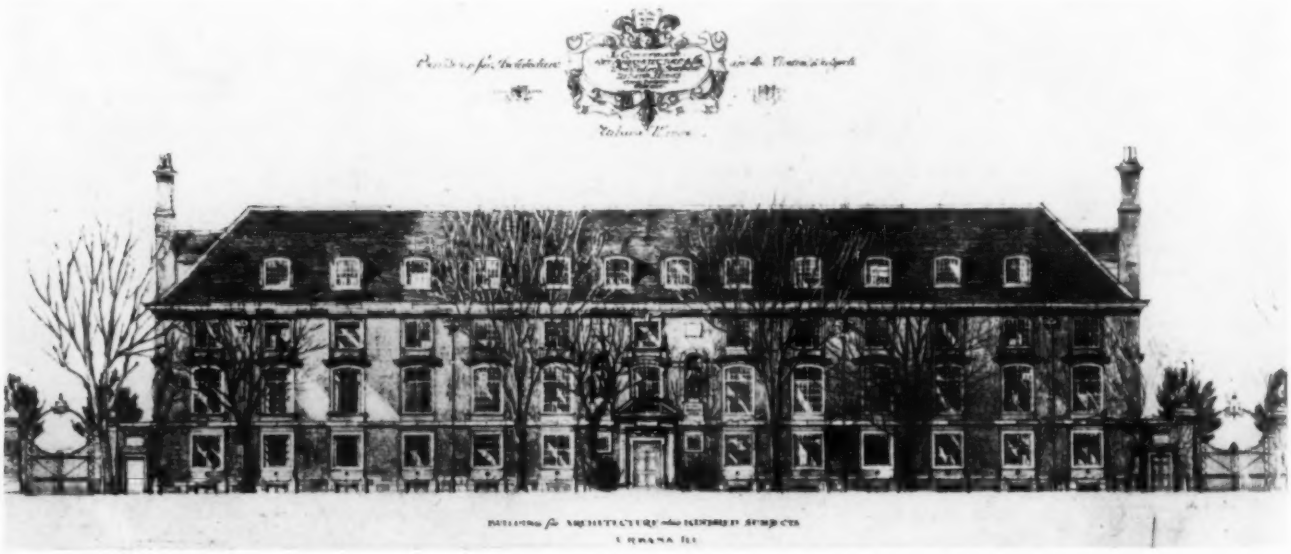
EXPOSITION OF AMERICAN DECORATIVE ART

An exposition of American industrial and decorative art will be held under the auspices of the Association of Arts and Industries and the Art Directors' Club of Chicago in Mandel Brothers department store, Chicago, in January of next year.

The exposition will differ in certain important respects from any kindred event yet arranged in this country.

Modern decorative art exhibitions held in department stores in different American cities during the last two years have been organized by the stores themselves, who issued special invitations to outstanding American and foreign designers to contribute examples of their work.

The coming exposition will be wholly American and exclusively modern; it is being organized by a manufacturers' association and will be staged by an independent committee of architects and artists.



BUILDING FOR ARCHITECTURE, UNIVERSITY OF ILLINOIS

ARCHITECTS' EXHIBIT ROOMS

To make more real the conceptions of architects and craftsmen, the American Designers Gallery was originated and has now opened in New York City. It is a show place—not for rendered designs nor even models, but for the display of completely furnished rooms or angles of rooms. Emphatically, the purpose of the gallery is to "spread far and wide the gospel of modernism."

The architects and designers who banded together as exhibitors include Ralph T. Walker, Herman Rosse, Raymond Hood, Ely Jacques Kahn, Winold Reiss, Joseph Urban, Henry Varnum Poor and M. Ryther.

C C C

BUILDING FOR ARCHITECTURE

A building for architecture at the University of Illinois was dedicated in November, with formal ceremonies accompanied by a conference on architectural education.

Ferruccio Vitale, landscape architect, C. Herrick Hammond, President of The American Institute of Architects, Irving K. Pond, architect, Alfred Granger, architect, and Professor L. H. Provine, Head of the School of Architecture, at Illinois, contributed to the discussion.

BEAUX-ARTS BALL

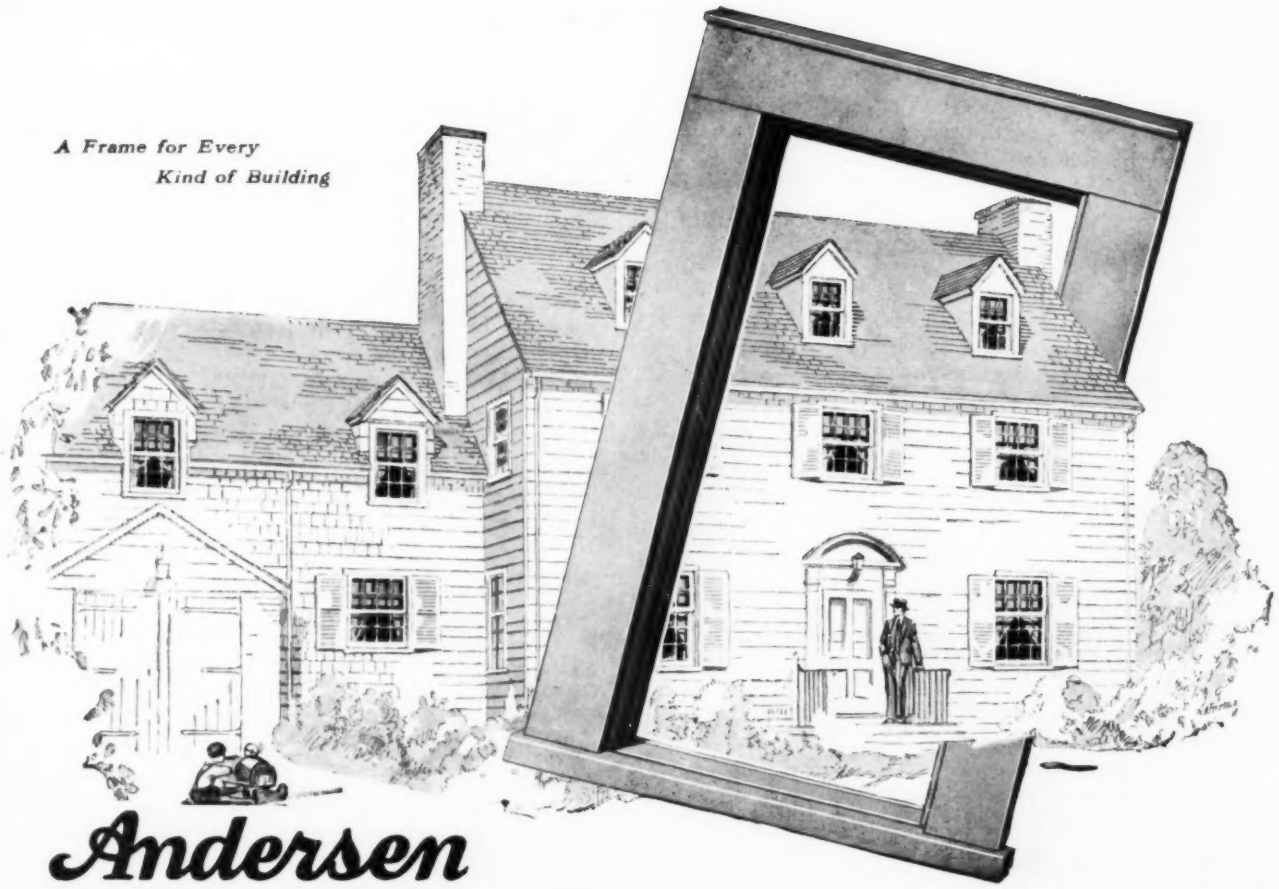
The Beaux-Arts Ball, sponsored each year by the Society of Beaux-Arts Architects, will be held in 1929 at the Hotel Astor, on the night of January 25. It will be preceded by an elaborate historical pageant of Napoleon I.

A nation-wide competition was held this year for the first time in which all registered students of The Beaux-Arts Institute of Design have an opportunity to submit designs for the programme and invitation covers. The successful designs will be exhibited at the new home of the Beaux-Arts Institute at 304 West 44th Street.

C C C

WORLD ENGINEERING CONGRESS

The first World Engineering Congress will be held in Tokio next year, for the purpose of attaining a closer international coöperation in the design and construction of engineering and industrial projects. Architects and architectural engineers who may be interested in attending this conference should communicate with Elmer A. Sperry, chairman, World Engineering Congress, 29 West 39th Street, New York City.



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See Sweet's Architectural Catalog, page B 1160 for frames, page B 1785 for pulleys.

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DRAFTSMEN'S EMPLOYMENT SERVICE

For many years the New Jersey Chapter of the A.I.A. and the New Jersey Society of Architects have maintained a Draftsmen's Employment Service and it is now desired to make the same of wider application than in the past.

Draftsmen seeking employment and architects seeking draftsmen are requested to get in touch with Gilbert I. Higby, 207 Market Street, Newark, New Jersey, who will endeavor to meet their requirements promptly.

SPECIFICATIONS AND COOPERATION

The Joint Committee selected from the Michigan Society of Architects and Associated Building Employers of Michigan has just completed a Standard Specification Outline for Building Construction. This outline is a grouping of the various items entering into building construction under its proper trade heading. The manual, as stated in the preface, "is the development of a feeling on the part of members of the Associated Building Employers of Michigan that many of the troubles in interpreting architects' specifications could be eliminated if the specifications were so arranged that the grouping of the subject matter conformed more closely to the bidders' system of purchase and to the division of work among the various trades as established by custom and by jurisdictional labor rulings."

The important fact in the completion of the "Outline" is that it represents the logical method of eliminating a cause for disputes arising from interpretation of specifications. Not only of disputes arising between contractor and architect but also between contractor and subcontractor.

LE BRUN TRAVELING SCHOLARSHIP COMPETITION YEAR 1929

The Executive Committee of the New York Chapter of the American Institute of Architects, as Trustees of the Traveling Scholarship founded by Pierre L. Le Brun, announces a competition for the selection of a beneficiary. The programme will be issued about January 15th, 1929, calling for drawings to be delivered about March 15th, 1929. All those wishing to enter the competition should arrange at once for nomination by a member of the American Institute of Architects. Nomination blanks can be had of the Secretary of any Chapter, A.I.A., or of the Le Brun Scholarship Committee. Nominations should be sent, so as to be received before January 15th, 1929, to Le Brun Scholarship Committee, Room 530, 101 Park Avenue, New York, N. Y.

BILLBOARD REGULATION

The American Institute of Architects is this year waging a crusade against unsightly billboards. It is an old and indecisive battle that first sought elimination, but now the objective is "reasonable control." A State, it has been legally recognized, has the right and power to make laws "regulating, restricting or preventing the exhibition of advertisements:—

1. that disfigure and injuriously affect the view of rural scenery from a highway or railway, or from any public place or water;
2. that injure or disfigure historic or public buildings;
3. that detract from the natural beauty of parks."

Public indignation against the unrestricted intrusion of billboards upon country roadsides and towns in Massachusetts resulted a few years ago in the passage of a law that has become a part of the State Constitution of Massachusetts, so as to legalize control of such advertising.

The great majority of the billboards in Massachusetts now stand in defiance of the law. Bill-posting companies have resisted the enforcement of the act and the case, now before the Supreme Judicial Court of Massachusetts, is of vital interest to the whole country.

The support of architects is solicited to aid the defense of the test case on restriction of billboard advertising begun in the courts. Contributions may be sent to Mr. E. T. Hartman, Treasurer, Massachusetts Billboard Law Defense Committee, State Street Trust Company, Boston, Massachusetts.

PHILADELPHIA EXHIBITION

The Thirty-first Annual Architectural Exhibition of the Philadelphia Chapter of the A.I.A. and the T Square Club of Philadelphia was held in the Gallery of the Art Club, Broad and Chancellor Street from October 26th to November 7th inclusive.

The Committee has departed from the usual exhibition in two ways, in that it first had its exhibition in the fall of the year instead of spring and secondly it provided a center city location, both of which have considerable appeal to the profession and the public at large.

NEW INSTITUTE DOCUMENTS

The American Institute of Architects issues various documents intended to assist, not only its own members but the entire profession of architecture. The following have just come from the Press of the Institute:

A Review of the Standard Documents by William Stanley Parker. A brief review of changes made in specification items, the General Conditions, the Bond and the Agreement, and in the Agreement between the Architect and on the Owner.

Agenda for Architects. This document is re-printed from the Handbook of Architectural Practice. It is a memorandum of procedure and progress which should be used on every job—no matter what its size.

Cubic Contents of Buildings—A Standard Method of Calculation and Form of Statement. This is a revision of an earlier form, published in 1926, setting forth an approved and systematic method of cubing buildings so as to approximate building costs.

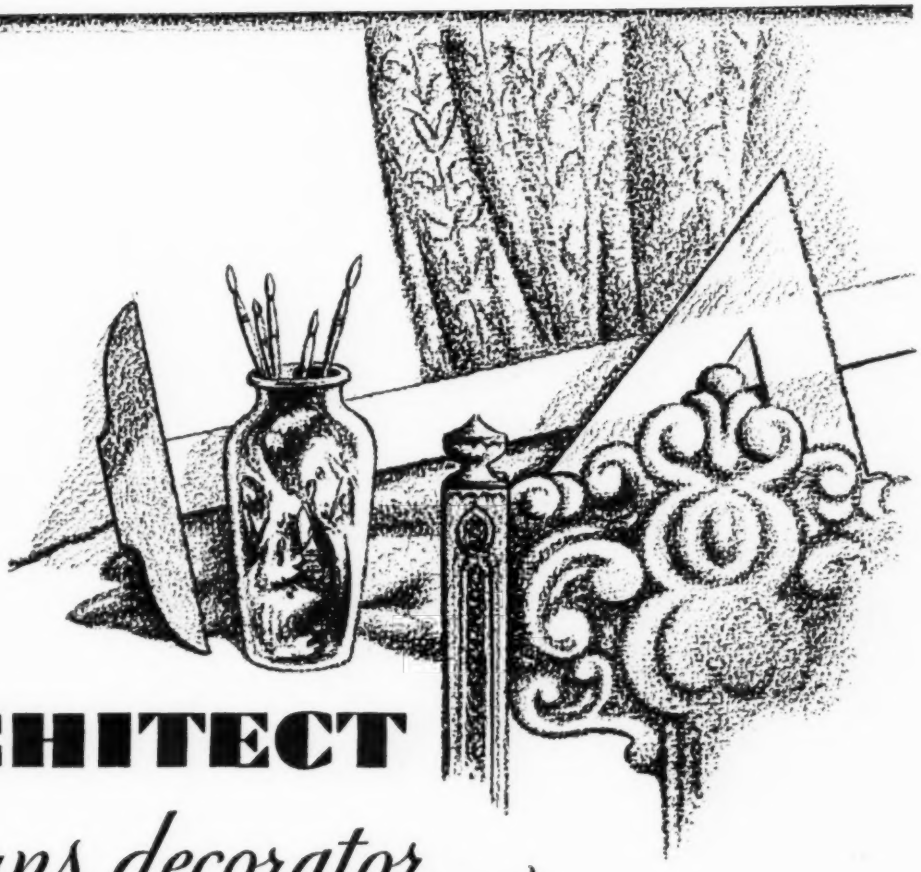
BRITISH CERAMISTS TO VISIT AMERICA

Returning the visit of American ceramists, the British Ceramic Manufacturers will be the guests of the Ceramic Manufacturers of America for three weeks during the coming year. Professor George H. Brown, Director of Ceramics, Rutgers University, is Chairman of the Programme Committee.

PROFESSIONAL ANNOUNCEMENTS

	Page*
Architects' Announcements	65
Notes in Brief	122, 124
News of the Field	126
Construction Statistics	128
Received from the Publishers	130
Recent Trade Publications	130

*Advertising Section



The ARCHITECT turns decorator

There seems to be no limit to the demands placed upon the architect.

Today he must have a decorator's flair for contrasts and colors. He must not only plan but *furnish* — with taste, sophistication and distinction — one of the show rooms of the house. For today's bathroom calls, not for grab-bag fixtures, but *furniture* — chosen with the same discrimination and care as that of the living room or bedroom.

Maddock—makers of the beautiful and famous Improved Madera toilet — now offers new, utterly distinctive creations in styled bathroom furniture. Furniture both in gleaming white and in new, exquisite Blentone colors, harmonizing two soft tones in the vitreous china underbody. Furniture of striking distinction of design, with trims of mirror-bright chromium plate and glowing gold.

Both the nationally known Improved Madera and the new styled bathroom furniture are pictured and described in a new de luxe book. It will be sent at once to architects who write for it on their professional stationery.

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TRENTON, N. J.

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NEWS OF THE FIELD

THE NEW process of electric welding for the elimination of noise in the assembling of steel beams is being employed on the Chalfonte-Haddon Hall power house job in Atlantic City, N. J. This power house is the highest and most substantial building ever welded, the addition now under way being an eight-story building 134 feet high, 80 feet wide, and 74 feet deep. The steel framework of it is to be entirely welded together. The only tool used in the welding is a General Electric welding machine having a capacity of 460 volts and 400 amperes, an oblong shaped instrument with an electrode at one end. A wire three-sixteenths of an inch in diameter and composed of ninety per cent steel is used as the connecting material in place of rivets. Before actually welding together the two girders, they are first bolted together to fix them in a secure and accurate position. The workmen wear steel masks when the current is turned on as protection from the terrific light thrown by the instrument. The welding is being done by the Bethlehem Steel Company. Katcham and McQuade of Philadelphia are the general contractors.

THE ANNUAL MEETING of the American Society of Mechanical Engineers will be held from December 3 to December 7. The business meeting will be held at eight o'clock on Monday evening, December 3. The technical sessions will begin at noon on December 3 and continue through the morning of December 7. The November issue of *Mechanical Engineering* contains synopses of all of the papers to be presented at the meeting.

A COMMERCIAL cooking conference and sales course for commercial managers, power salesmen, and commercial cooking specialists, was held September 17, 18, and 19 in the Graemere Hotel, Chicago, under the auspices of the Edison Electric Appliance Company, Inc. The conference was sponsored by the Commercial Cooking Committee, N.E.L.A. Representatives of forty-seven electric, power, and light companies from all parts of the United States attended the Edison section of the Commercial Cooking School. There were ten guests registered, including representatives from the International G. E. Company of Australia, and of Santiago, Chile. Mr. Grant Call was chairman of the school. Twelve topics were included on the program, covering market development, power sales, electric rates and competitive fuel costs, layout service, competition and architects' service, analyzation of the market, etc.

THE GYPSUM INSTITUTE has opened a headquarters office and a traffic department at 110 West 40th Street, New York City. The organization was formed by a group of gypsum manufacturers who recognized the need of cooperation in the gypsum industry. The properties of The Gypsum Industries, Inc., which suspended activities last May have been taken over by the Gypsum Institute. The new organization will function in much the same manner, it has announced, some of the same personnel of the former association being retained.

THE FLINTKOTE COMPANY has entered the international field through a recent partnership with the Royal Dutch-Shell group of companies. This alliance is the beginning of Flintkote's world-wide distribution. The Royal Dutch-Shell group is one of the world's most successful business organizations. This group is investing between $8,000,000 and $9,000,000 in the new partnership. The Flintkote Company retains its present name, management and policies. Through the partnership it is assured of an adequate supply of its principal raw materials, asphalt and other petroleum products, upon a favorable basis.

ENY ART, INC., has announced their first outstanding installation of "Modernistic Decorative Carved Plate Glass," featured throughout the interior and exterior of the new Wise Shoe Store, 384 Fifth Avenue, New York City. Ninety per cent of the full surface of the store front and lobby is composed of "Eny" glass. The product has been widely approved by leading architects, prominent theatrical organizations, department stores and artistic centres throughout the country.

THE SIXTH ANNUAL CONVENTION of the American Institute of Steel Construction, Inc., was held in Biloxi, Miss., from November 13 to 17 inclusive. "What Do Builders Know About Fireproof Material?", was one of the subjects chosen for special consideration. Mr. E. W. Krueger of the Worden-Allen Co., Milwaukee, Wis., of the committee appointed to study fireproofing as related to structural steel, and Mr. Clinton T. Bissell of the National Board of Fire Underwriters spoke on the subject. The elimination of noise in construction work was another problem taken up at the convention. Mr. Fred T. Llewellyn, president of the American Welding Society, and Mr. J. R. Dawson, metallurgical engineer of the Union Carbide and Carbon Corporation, were speakers concerning this.

APPROVAL of a proposed commercial standard for malleable iron or steel screwed unions for use with standard weight pipe was given by representatives of interested elements of the industry in general conference, September 24. The conference was under the auspices of the Commercial Standards Unit of the Bureau of Standards, Department of Commerce. This commercial standard pertains to black and galvanized types of brass seated malleable iron or steel unions. It was agreed by members of the conference that new production, in accordance with the schedule as defined by the standard, would begin on May 1, 1929, allowing until November 1, 1929, to use up existing stocks. The standard will be subject to annual review by a standing committee, in order that it may keep abreast of such changes as may take place in the art. Mr. I. J. Fairchild of the Bureau stated to the conferees that the Department would prepare the standard for submittal to industry for signed acceptance, at an early date. It is necessary that at least sixty-five per cent of the industry, by volume of annual production, accept the standard in writing, and with no outstanding opposition of the others, before it will be published by the Department of Commerce.

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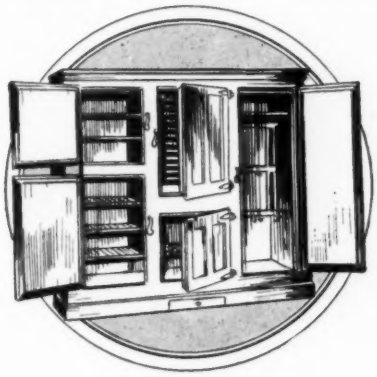

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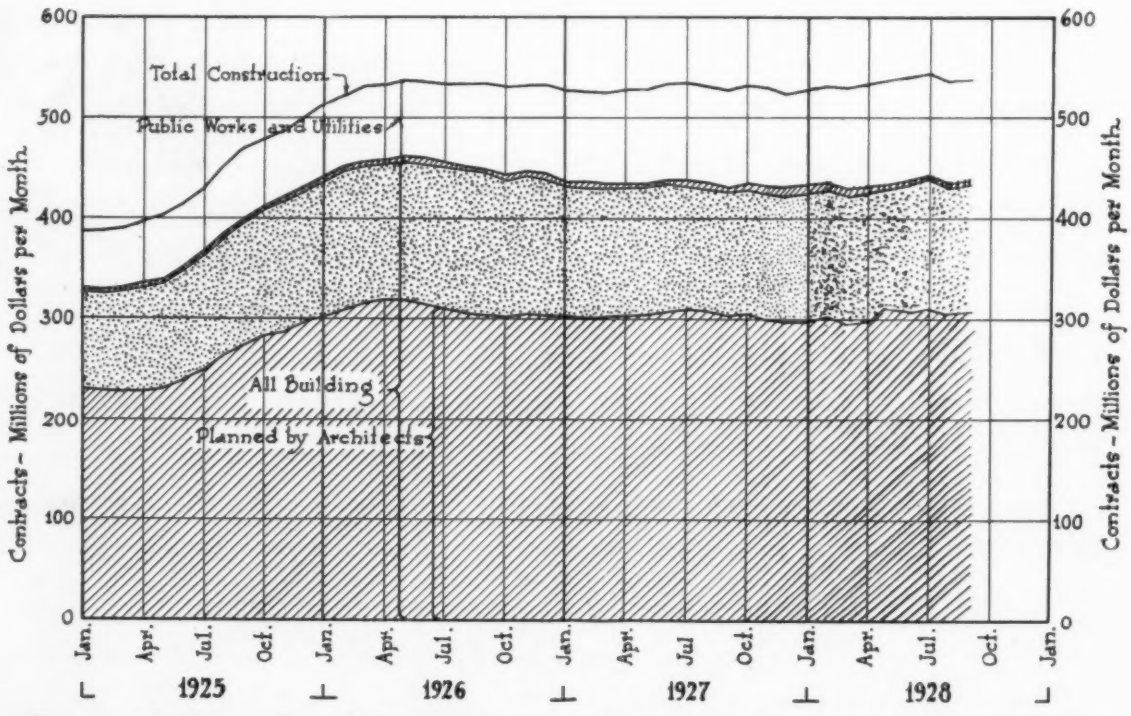
CONSTRUCTION STATISTICS

From the records of F. W. DODGE CORPORATION, Statistical Division. The figures cover the 37 states east of the Rocky Mountains and represent about 91 per cent. of the country's construction volume.

First Nine Months 1928

Classification	TOTAL CONTRACTS Number of Projects	TOTAL CONTRACTS Valuation	PLANNED BY ARCHITECTS Number of Projects	PLANNED BY ARCHITECTS Valuation	Per cent. of Total
Commercial Buildings	18,104	$682,197,500	7,972	$532,940,700	78%
Educational Buildings	4,027	312,311,400	3,252	299,326,300	96%
Hospitals and Institutions	854	113,308,300	628	106,924,500	94%
Industrial Buildings	4,468	496,218,800	1,606	159,031,300	32%
Military and Naval Buildings	144	11,408,300	49	4,423,400	39%
Public Buildings	908	45,695,800	565	41,101,700	90%
Religious and Memorial Buildings	2,023	105,907,700	1,514	97,246,200	92%
Residential Buildings	108,096	2,170,076,700	29,769	1,380,282,800	64%
Social and Recreational Projects	2,127	174,007,200	1,393	157,162,200	90%
Total building	140,751	4,111,131,700	46,748	2,778,439,100	68%
Public Works and Utilities	15,300	1,015,812,400	251	28,085,900	3%
Total construction	156,051	$5,126,944,100	46,999	$2,806,525,000	55%
Total construction, first nine months, 1927	140,251	4,796,482,100	43,571	2,776,622,300	58%



General Trend of Building and Engineering Construction

DEC 1 2 1928

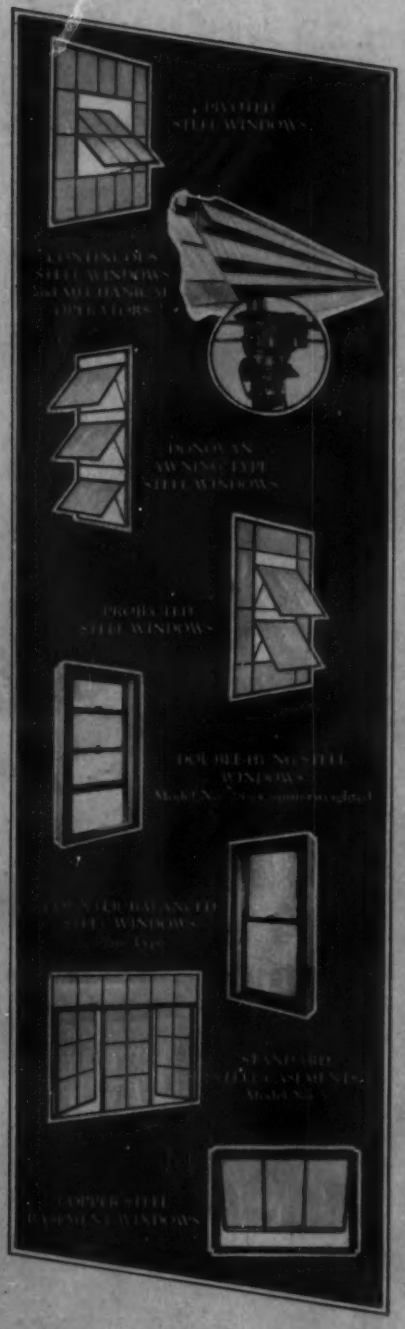
THE ARCHITECTURAL RECORD

PUBLISHED MONTHLY

DECEMBER, 1928

MODERNIZE OLD BUILDINGS WITH

TRUSCON STEEL WINDOWS



The one feature which is always associated with modern buildings is steel windows. Everywhere in every type of building—residential, industrial, commercial or public—steel windows are preferred for their added daylighting, better ventilation, fire protection, easy operation, attractive appearance and permanence. Old buildings can be made modern by replacing the old windows with Truscon Steel Windows. There is a type of Truscon Steel Window to meet every building requirement. Truscon Window Specialists will gladly cooperate with you in obtaining a practical solution of your remodeling problem.

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STEEL WINDOW DIVISION
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A Complete Line of Windows for Every Type of Building

On Time Deliveries!

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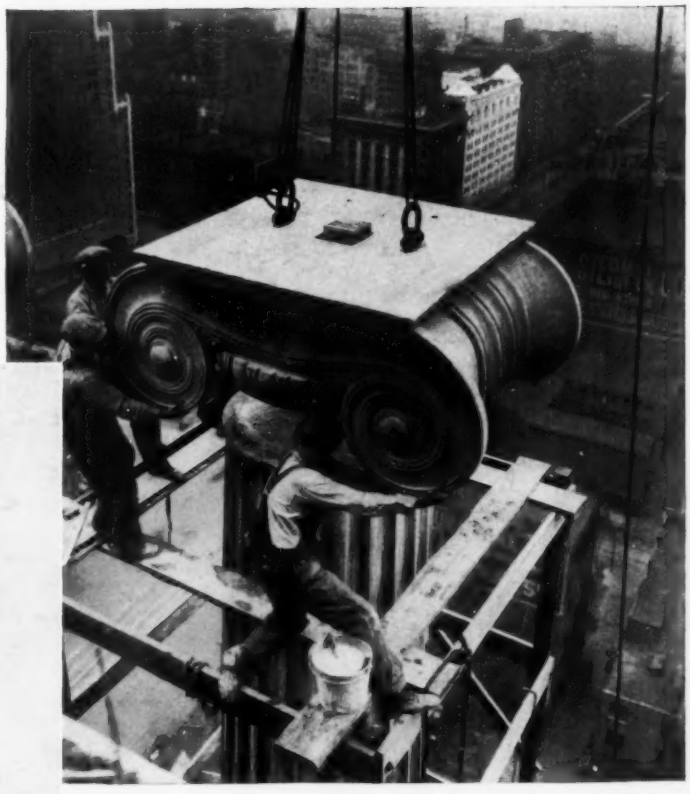

These pictures of the Civil Court House, St. Louis, Mo., in course of construction, indicate the kind of operations in which Indiana Limestone Company service has proved a factor of first importance in assuring the rapid and satisfactory completion of the job. Plaza Commission, Inc., Architects. Selden-Breck Construction Co., Builders

THE time element in construction is a matter to which this Company has given the most painstaking attention. Our record of service in connection with such projects as the Civil Courts Building in St. Louis and many other large size operations has proved to the satisfaction of leading architects and contractors that "Indiana Limestone Company is not only big enough but well-organized enough to handle any job right." We invite your investigation of our record. Find out how other leading architects and contractors are finding it a real economy to pay a reasonable preference for this service.

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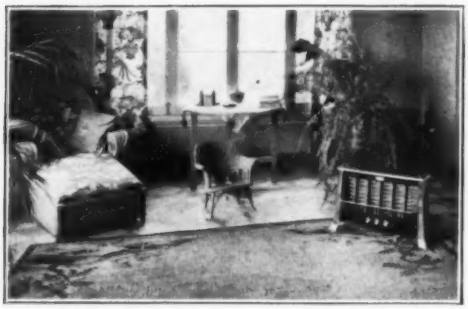

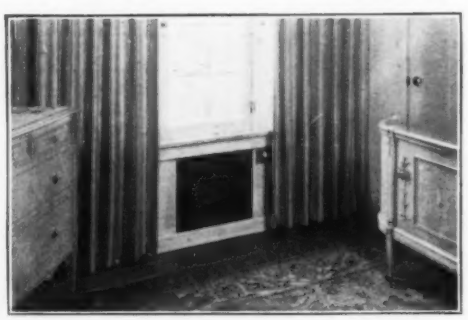

Hotpoint Air Heaters are made for wall installations in living rooms, bedrooms, bathrooms, halls, etc.; portable for any room and for fireplaces. These illustrations show various applications of these modern heaters for home use.

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ELECTRICITY for air heating is rapidly growing in favor for heating of homes, apartments and offices in climates where winters are mild. In colder climates this convenient form of heating has been found ideal for supplementing fuel heating systems. Many electric companies give a special rate for electric heating that makes it exceedingly practical to use this modern method.

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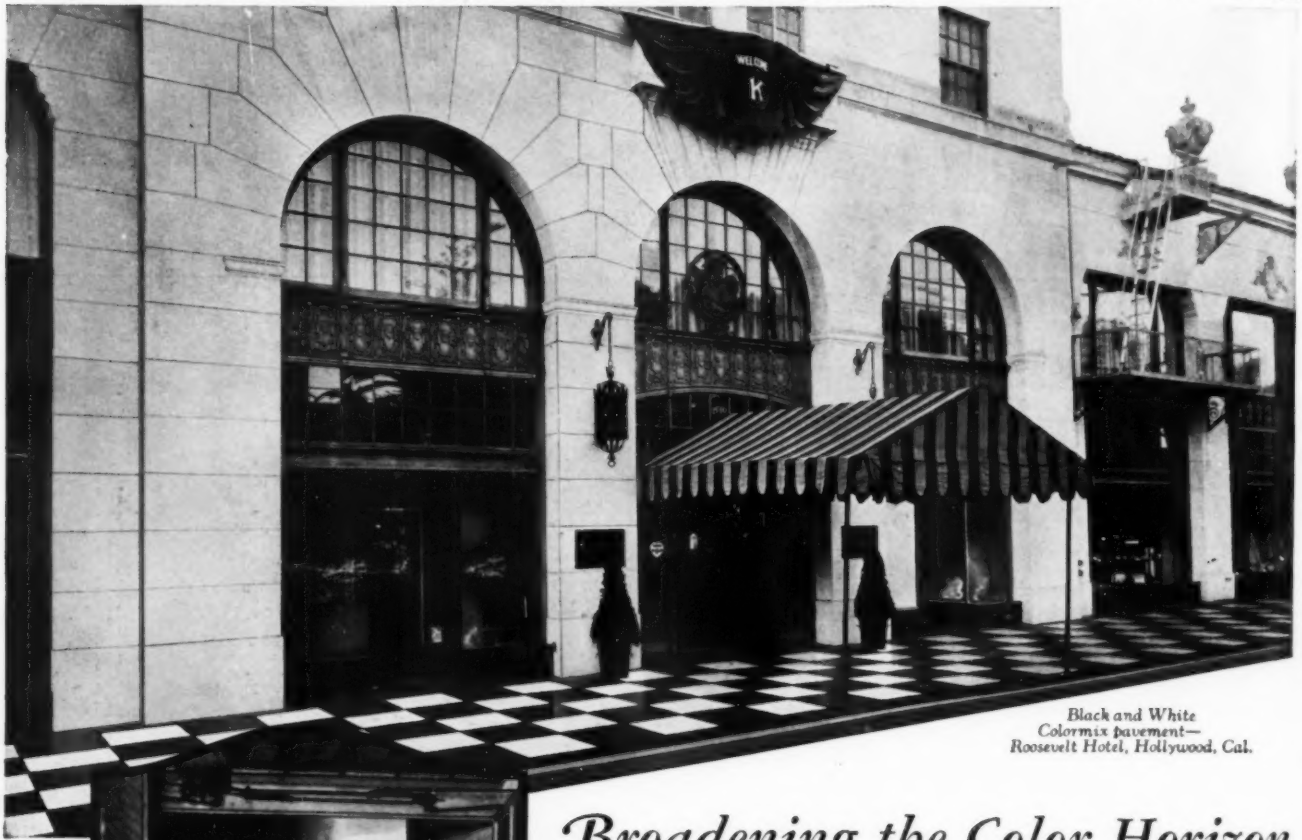
COLORMIX FLOORS

COLORED HARDENED CONCRETE



Black and White
Colormix pavement—
Roosevelt Hotel, Hollywood, Cal.

Battleship Gray Colormix Driveway at Lake Shore Apartments, 209 Lake Shore Drive, Chicago, Ill.
Benjamin H. Marshall, Architect

Broadening the Color Horizon

WITH the present generation color has come back into its own. Colormix contributes materially to the architect's freedom in the use of colors by making concrete beautiful without risking the deterioration which formerly followed attempts to bring concrete into the color scheme. The use of Colormix pavements at the Hollywood Roosevelt and the Lake Shore Apartments is typical of the modern trend.

Colormix is produced in nine colors

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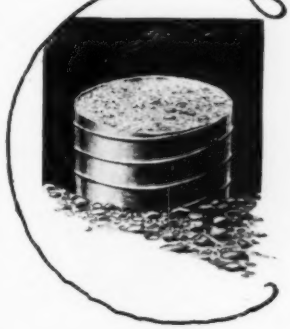
REMEMBER one thing—in many cases you cannot tell what will happen to an unprotected "green" concrete pile column in the ground. In the Raymond Method it is poured into a pressure-proof steel shell and that shell is left in the ground to protect it.



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NEW YORK: 140 Cedar St. CHICAGO: 111 West Monroe St.

Raymond Concrete Pile Co., Ltd., Montreal, Canada

Branch Offices in All Principal Cities

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BUFFALO	KANSAS CITY	PITTSBURGH	WASHINGTON
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A pile for every purpose

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ORIGINATORS OF
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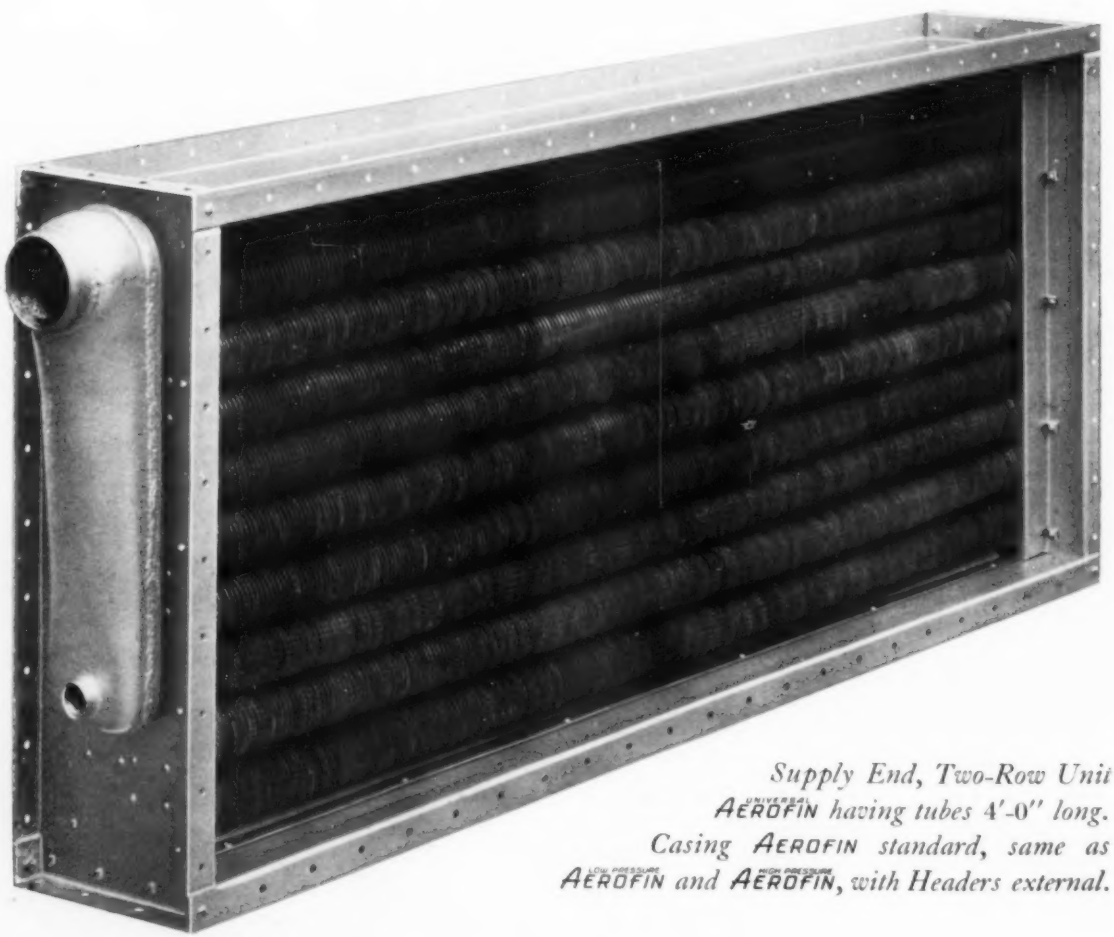
ANNOUNCE

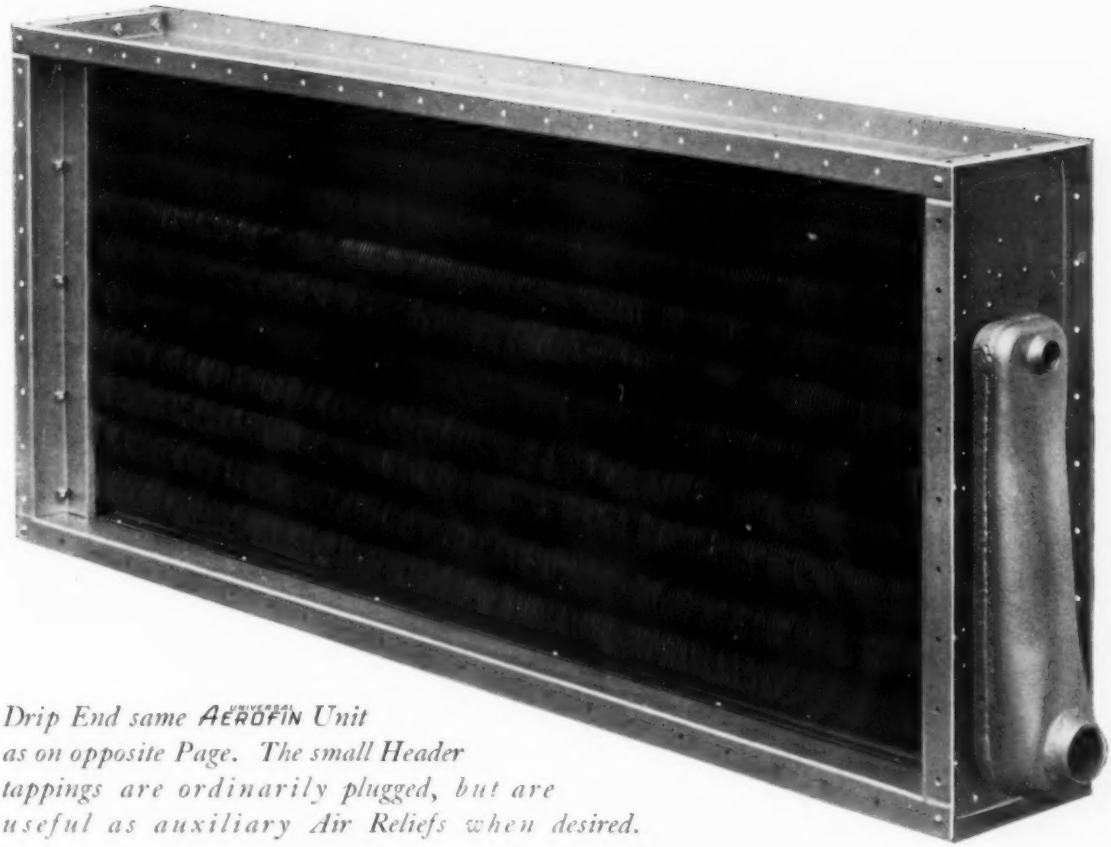
UNIVERSAL AEROFIN

FOR

PRESSURES FROM 2½ TO 150 LBS. GAUGE



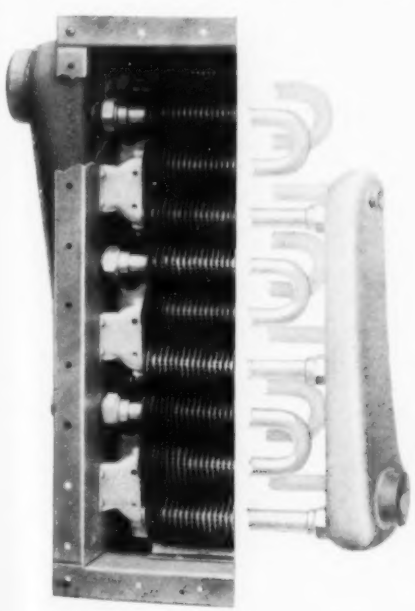
Supply End, Two-Row Unit UNIVERSAL AEROFIN *having tubes 4'-0" long. Casing* AEROFIN *standard, same as* LOW PRESSURE AEROFIN *and* HIGH PRESSURE AEROFIN, *with Headers external.*



Drip End same AEROFIN *Unit as on opposite Page. The small Header tappings are ordinarily plugged, but are useful as auxiliary Air Reliefs when desired.*

AEROFIN, the latest addition to the AEROFIN family,—complementing AEROFIN and AEROFIN, of which more than eleven million feet are in service,—provides a standardized, non-corrosive, light-weight, compact, self-encased Unit Heat-Surface having every characteristic AEROFIN advantage and usable for the whole range of pressures between 2½ and 150 lbs. gauge.

In AEROFIN the heat-surface is a continuous seamless copper tube bearing the proved AEROFIN helical, crimped extended surface, made metallically integral with the tube. The tubes are bent into a three-pass coil, ends opposite, as indicated at the left, the upper end of the tube being connected to the die-stamped, welded Supply Header, the lower to the Drip Header, these connections being made by means of special brass compression unions, forming absolutely tight, dependable connections. A set of three three-pass coils mounted one above the other constitutes a "row of tubes." AEROFIN is designed for installation with tubes horizontal only. It is made in one-row or 2-row Units, in 17 standard tube lengths, between 2 ft. 0 in. and 10 ft. 0 in., inc., in increments of 6 in.



Bulletin U-8, containing complete data, including 4-color piping diagrams, will be forwarded promptly upon request to Newark.

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A TIDEWATER RED CYPRESS INTERIOR

The residence of Mrs. J. W. Oakford of Scranton, Pennsylvania. Panels of pecky cypress. Trim of smooth-grained regular grade. Davis and Lewis were the architects.

IN the modern search for combinations of the distinctive and the simple, architects are favoring Tidewater Red Cypress more and more each year.

Unfinished, stained or painted, and in either the regular or pecky grades, Tidewater Red Cypress is a wood of unbounded versatility.

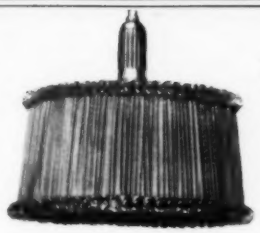
Complete information on this beautiful and enduring wood will be sent gladly by the Southern Cypress Manufacturers Association, Department A R-12, Jacksonville, Florida.

Specify TIDEWATER RED CYPRESS

THE WOOD ETERNAL

DUPLEX-A-LITED

Talmadge Apartment Hotel
Los Angeles
Curlett & Beelman, Architects



A dining room in one of the Talmadge suites, showing Duplex-a-lite with silk shade

Owners Feature this Lighting as a Recognized Advantage

OWNERS of Duplex-a-lited buildings do not take their lighting system for granted. They recognize its advantages, and use them as features in creating good will for their buildings.

For Duplex-a-lite, alone, is a balanced blend of direct and indirect illumination. It satisfies the psychological necessity for an apparent source of light, but the entire ceiling becomes the distributing agent for the majority of the light. Hence there is no glare or sharp shadows. There is a luminous shadow—just enough to give definition to objects.

Moreover, Duplex-a-lite is a standard lighting system which is most versatile. Each Duplex-a-lite fixture can be dressed to harmonize with any surroundings. It can be adapted and re-adapted—with silk or parchment shades—standard and special designs in any colors and metals—simple or ornate.

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We shall be glad to send you a booklet which shows how this standard lighting system can be dressed to harmonize with its surroundings.

DUPLEX-A-LITE DIVISION
of The Miller Company
Meriden, Conn.
"Pioneers in good lighting since 1844"

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Hershey High School, Hershey, Pa.
Independence Indemnity Building, Philadelphia
Seville Biltmore Hotel, Havana, Cuba
City Savings Bank Building, Albany, N. Y.
International Mercantile Marine Building, New York
Los Angeles Biltmore Hotel, Los Angeles
Strauss Building, Chicago
Alhambra High School, Alhambra, Calif.
Masonic Memorial Hospital, Utica, N. Y.
The Macmillan Company, New York
General Motors Building, Detroit
Matson Navigation Building, San Francisco
Mayflower Hotel, Washington, D. C.
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MADE IN U. S. A.

A TYPICAL GLAZED PATTERN MADE
IN A VARIETY OF COLOR SCHEMES

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GLAZE, COLOR AND TEXTURE offer no end of possibilities to the designer who has imagination. He likes to play with tile work. Strong colors may be contrasted with dull toned surfaces---high lights with the unglazed pavers---glazed patterns with plain areas.

THE PERMANENCE of a tile installation should call for reasonable restraint in the matter of design. Unity of effect is more to be desired than a mere scramble of unrelated tile units. We produce materials of varied character---glazed and unglazed---contrasting favorably with each other because they are all bound together in unity by a common factor.

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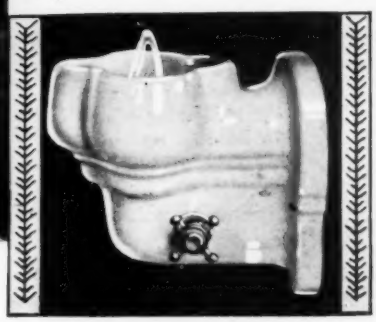
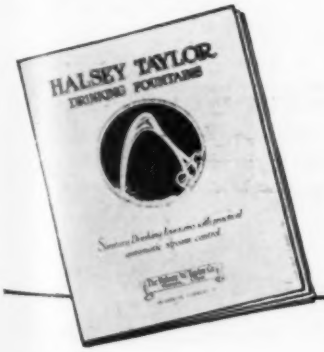
For Municipal Buildings

City Building of Asheville, N. C. (Douglas Ellington, Architect, Asheville)

No. 605 Halsey Taylor Wall Type, Vitreous China, installed in this building.



Send for Architects' Manual
with descriptions and illustrations of complete line, A. I. A. file.



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DRINKING FOUNTAINS

Bar This Unnecessary Risk Before Building

Williams Equipment merely adds, in a simple manner, the reversible feature to the ordinary, accepted double hung window. It is well worth considering on any new building.

THE window washer, perilously balanced on the narrow, outside sill is needlessly risking his life and wasting the building owner's money. Williams Reversible Window Equipment would let him wash both sides of the window from inside the room with both feet planted securely on the floor. He, then, would not demand a premium wage for risking his life. Mentally at ease, and free to move around, he could do a quicker and more thorough job.

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*Lexington Ramp Garage.**
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Lynchburg Ramp Garage.†
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Malden Electric Co.
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Nelson House Garage.
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*Under Construction †Plans Completed

DOWNTOWN traffic congestion is proportionately just as great as in the million-population centers. Often parking garages are more needed in the small, concentrated business area of a 25,000 population city than in the wider areas of a larger one.

Three or four story garages on relatively small plots—but right where the great need exists—are profitable to build and operate. Look over the possibilities near you!

Have you our Data Sheets —particularly on the possibilities of small garages? They will be sent on request.

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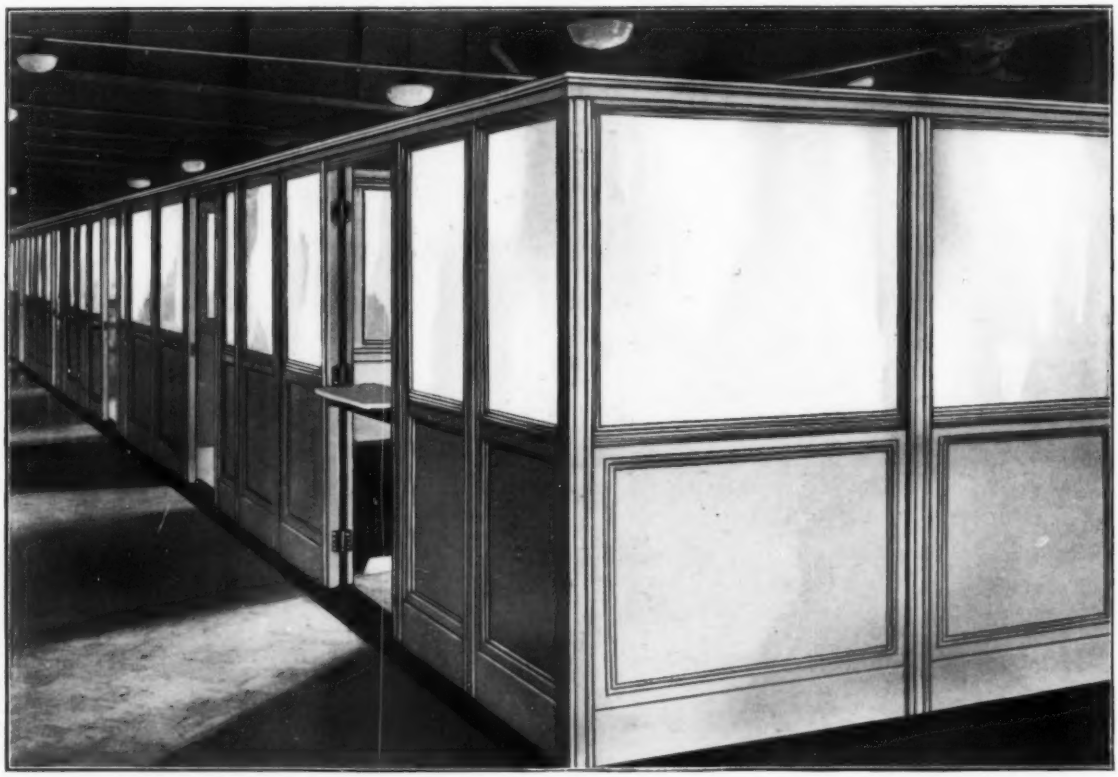

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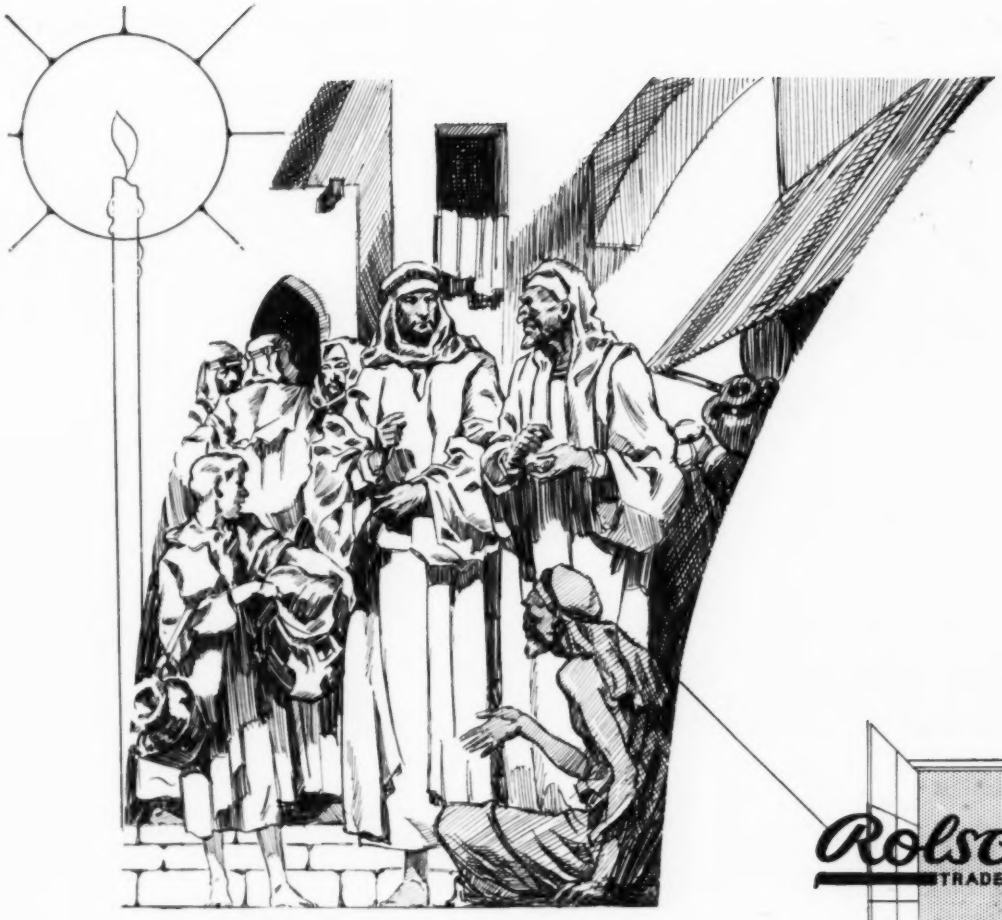
OFFICE and TOILET

STEEL PARTITIONS



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TRADE MARK

"Ideal Screens for Windows"

The Red Hues of Christmas are the Stop Signals of Commerce

Red holly, red ribbons, red tissues, the warm glow greets us at every turn. Surely in this hurry-scurry and rush of modern commercial traffic these happy red colors are our "Stop Signals."

The on rush of business pauses to give way to a bit of sentiment for a short season.

The entire Rolscreen organization from coast to coast takes this opportunity to express the "Thank you" so often felt during our few years of association, for the hearty cooperation given us by you, architects and builders.

Thank you, and Good Cheer!

ROLSCREEN COMPANY

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Stating

PROBLEM No. XI.

Required an acceptable material for the main hall and mezzanine floors, in a Spanish house at Palm Beach; and a colonial one at Bar Harbor. Must be interesting in texture; have a suitable range of time-tone colors; and an agreeable resiliency.

Palm Beach residence of Mr. and Mrs. Edward T. Stotesbury

Hall at Wingwood, the Stotesbury Bar Harbor residence

The PROBLEM *Solved*

IN the Palm Beach and Bar Harbor residences of Mr. and Mrs. Edward T. Stotesbury, Zenitherm solved the problem.

The red, drab and green, used in the Palm Beach subject, although of distinct Spanish flavor, because of Zenitherm's inherent tri-tone effects, produced a brilliant, yet pleasingly restrained result.

The black and the stone grey colors employed at Bar Harbor, in like manner had the desirable subdued effect, in keeping with the residence's colonial design.

In both instances, so far as possible, the Zenitherm was cut to design at our factory and shipped ready to lay.

In addition to its pleasing texture and color range, Zenitherm is fire-resistant, water-proof, vermin-proof and a remarkable insulator of heat and cold.

Furthermore, it is eminently wear-resistant.

A. G. H. Dumaine *President*

Also a view at Wingwood

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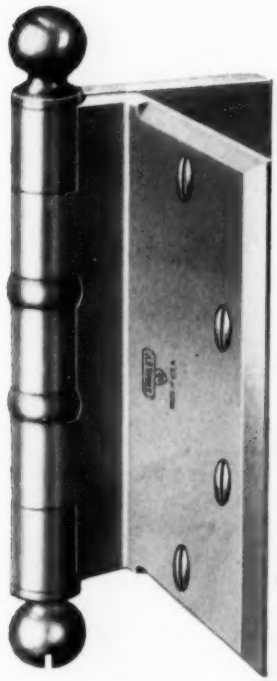
4 considerations in selecting Butts for Kalamein Doors



Stanley Half-Surface Template Ball-Bearing Butt No. BB163.

1 *Half-Surface and Full-Surface Butts.* The "filler" of a Kalamein door rarely provides sufficient anchorage for the wood screws of a full-mortise butt. The bolts and grommet nuts with which half-surface and full-surface butts are applied fasten through the door, as is shown in the illustration at the right, and will not loosen or pull out.

2 *Ball-Bearing Butts.* Kalamein doors as a rule are subjected to high-frequency service. To avoid sagging or binding of doors, ball-bearing butts should always be used.

3 *Wrought-Steel Butts.* Butts made of wrought steel are recommended as the best type to withstand the extreme conditions to which the doors and butts may be subjected in case of fire.

4 *Template Butts.* Since the majority of jambs for use with Kalamein doors are made of pressed steel, the screw-holes for the butts are drilled at the factory. It is therefore essential that the butts be made to template to guarantee their proper application at the building.

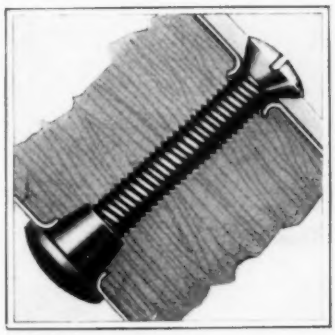
The surface leaves of Stanley Ball-Bearing Half-Surface and Full-Surface Butts are beveled to present a neat appearance when applied. When desired these butts can be furnished for painting. When so furnished, the inner edges of the leaves are milled back so that the paint will not be scraped off the barrel of the butt when the door is operated.

Kalamein doors with Kalamein or Pressed Steel jambs require HALF-Surface Butts.

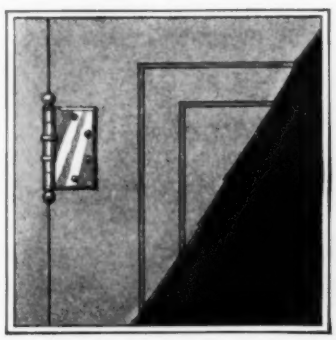
Kalamein doors with Channel Iron jambs require FULL-Surface Butts.

The Stanley Architects' Manual explains fully the proper equipment for all usual and unusual door conditions. It gives standard specifications for applying butts to Kalamein doors. Let us send you a copy.

THE STANLEY WORKS · NEW BRITAIN, CONN.



Half-surface and full-surface butts are attached with bolts and grommet nuts which fasten through the door



Half-surface and full-surface butts are easily applied and present a neat finished appearance.

STANLEY S.W.

STANLEY BALL-BEARING BUTTS

ROYAL YORK HOTEL
Toronto, Canada

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Ross & Macdonald, *Architects*
Sproat & Rolph, *Associate Architects*

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☆ In a Jewett book of much practical information—which we invite you to write for—you will find a roll call of Jewett installations that is evidence of the fact that Jewett Refrigerators are indeed famous for the company they keep. ☆

IN hospitals, clubs, public buildings and institutions of all kinds, as well as in the Royal York Hotel at Toronto, Jewetts are the choice of those who know the value of long life and economy of daily operation. For 80 years, four generations of the Jewett family have upheld the highest quality standards in refrigerating equipment. This unequalled experience is at your disposal.

THE JEWETT REFRIGERATOR CO.
Established 1849 **BUFFALO, N. Y.**

Branches: New York, 16 East 40th St.; Chicago, 228 North LaSalle St.; Boston, 11 Beacon St.; Atlanta, 245 Spring St. N. W.; Cleveland, 2036 East 22nd St.; Montreal, 10 Cathcart St.; Toronto, 45 Colborne St.

Refrigerators of Unquestioned quality for

Hotels
Hospitals
Clubs—

and every other type of building or institution.

JEWETT
REFRIGERATORS

GAS

Illustration reproduced from Bryant educational advertising program appearing in *Saturday Evening Post, National Geographic Magazine, House & Garden, Time* and other publications. The cleanliness of gas heat and the greater usefulness of the basement are emphasized.

"Let the Pup be Furnace Man"

IN every line there is a leader. In gas-fired heating equipment it is BRYANT. Bryant has 20 years of heating engineering experience behind each recommendation. Bryant maintains its own designing and *testing* laboratories. Bryant has built more gas-fired boilers than the next 14 makers combined.

WHEN YOU RECOMMEND A BRYANT you can point out to your client that he can throw away his coal shovel—junk his ash can—make a single match his winter's kindling—tend furnace by the calendar, not by the clock—live in a warm house, sleep in a cool one—laugh at blizzards . . . . . and enjoy winter.

THE BRYANT HEATER & MANUFACTURING COMPANY

Service offices in 37 cities from coast to coast. If "Bryant" is not listed in your phone book, write

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BRYANT HEATING

for Hot Water, Steam AUTOMATIC GAS Vapor *and* Warm Air

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For PLASTER ORNAMENT architects rely on these six catalogues

They contain a wealth of decorative material architecturally correct in detail

THE vogue of plaster ornament is steadily increasing. In recent years this age-old art has attained its greatest popularity in furnishing interesting interior detail for the more modest homes—seven, eight and nine room houses and apartments.

With this wider use of ornamental plaster a distressing problem often confronts the architect. Sometimes in cases where he himself is anxious to include some plaster detail in the plans, he is reluctant because of the added cost it might entail. Yet a touch of plaster need not be expensive. More and more, architects are coming to rely on the catalogues of the six firms listed below, by means of which correct plaster ornament is quickly available *at moderate cost* in all parts of the country.

Models for thousands of designs, ranging in period from classic to modern, are always on hand—a wealth of ornamental material from which to choose. Each of the firms, too, employs draftsmen trained in the use of ornamental plaster and always ready to co-operate in developing new designs and adaptations.

In the interest of creating a wider appreciation of plaster ornament, these same six firms are acquainting a most discriminating section of the public with the real possibilities of this art material through advertising in magazines like House and Garden.

* * *

Architects and Decorators are invited to write to each of the six firms listed below for their individual catalogues.

W. STANWOOD PHILLIPS, Architect

PLASTER ORNAMENT *for* PERIOD DESIGN

Chicago—THE DECORATORS SUPPLY CO.
Archer Avenue and Leo Street

Cleveland—THE FISCHER & JIROUCH CO.
4821 Superior Avenue

Detroit—DETROIT DECORATIVE SUPPLY COMPANY
4240 14th Avenue

New York—JACOBSON & COMPANY
239-241 East 44th Street

Philadelphia—VOIGT COMPANY
1743-49 N. Twelfth Street

Chicago—ARCHITECTURAL DECORATING COMPANY *1600-12 South Jefferson Street*

Titus Vespasianus, Roman Emperor from A. D. 70-79, was a patron of the arts and possessed the gift—entirely wasted upon an emperor—of being able to imitate to perfection the handwriting of others. The magnificently decorated baths he built for his Roman subjects surpassed all preceding ones and covered almost a square mile of ground.

Brasscrafters' Chromium Plate Colonial Pier-Type Structural Mirrors

With Flambeau Motif from the Baths of Titus

THESE SPLENDID MIRRORS are of French plate glass with a very beautiful classical design cut—(not etched)—upon the silvered side, so that the front surface is clear and smooth. The flambeau design here shown was considered by Raphael of such beauty that he adopted it for many building decorations. The mirror plate measures 20 by 30 inches, and the over-all size is 2 inches larger in each dimension. The seamless structural brass frame is finished in Brasscrafters' Chromium Plate and is supplied with concealed devices for hanging.

THE FRAME—AN IMPORTANT CONSTRUCTIONAL DETAIL

All Brasscrafters Structural Mirrors have frames with a moulded web or flange at the outside border. This flange is not mitered at the corners, but wrought of one piece and is the factor which makes the whole a structural part of the panel or wall on which it is placed. Brasscrafters Structural Mirrors require no openings or changes in marble or tile walls.

Write for our special leaflet "Pier-Type Structural Mirrors and Recess Medicine Cabinets—French Plate Glass—Cutting from famous Roman Designs."

The TRADE MARK Brasscrafters

J. P. Eustis Manufacturing Company

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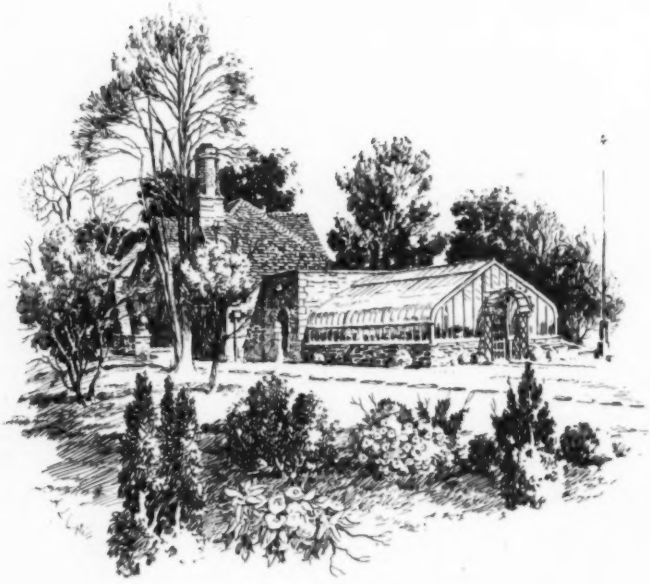
GLASS ENCLOSURES



Tell Us Why—*will you please?*

TELL us why so many seem to think that a greenhouse, to be a real greenhouse, must always be painted a glaring white on the outside? It seems that no matter what the color of the other buildings is, the greenhouse must be made to stick out by painting it white. You ask in reply, "What difference does it make, what color it's painted?"

It makes a lot of difference. We want every one who buys our houses to have them right in every way. Want them to have their money in something of *lasting satisfaction.* Something that is attractive and in entire harmony with the rest of the place.

Therefore, when we built this snug little house on the Tudor Stone garage, we painted it a color to match the stone. As a result the greenhouse is an harmonious part of the garage. It's just one of the so-called refinements that we are constantly making. Things that, although they don't cost a bit more to have, still do add greatly to the value of the greenhouse.

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Builders of Greenhouses and Conservatories

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The Fisher Building Roof is CORK INSULATED

99,000 sq. ft. of Armstrong's Corkboard were laid on the roof of the Fisher Building, Detroit. Albert Kahn, Inc., Architect; J. D. Candler Company, Roofing Contractor.

ON the Fisher Building, one of Detroit's outstanding examples of modern commercial architecture, the entire roof area, nearly 100,000 square feet, is insulated with Armstrong's Corkboard. Thus ample provision is made for protection against outside temperatures—to keep the top floors comfortable the year round, as easily heated in winter and as cool in summer as the floors below.

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Write for any one or all of these three books: "The Insulation of Roofs with Armstrong's Corkboard," "The Insulation of Roofs to Prevent Condensation," and "Architects' Filing Catalog" (containing detailed information, drawings and specifications). Armstrong Cork & Insulation Company, 161 Twenty-fourth Street, Pittsburgh, Pa.; McGill Building, Montreal; 11 Brant Street, Toronto 2.

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for the Roofs of All Kinds of Buildings

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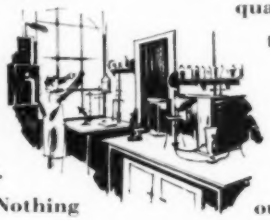

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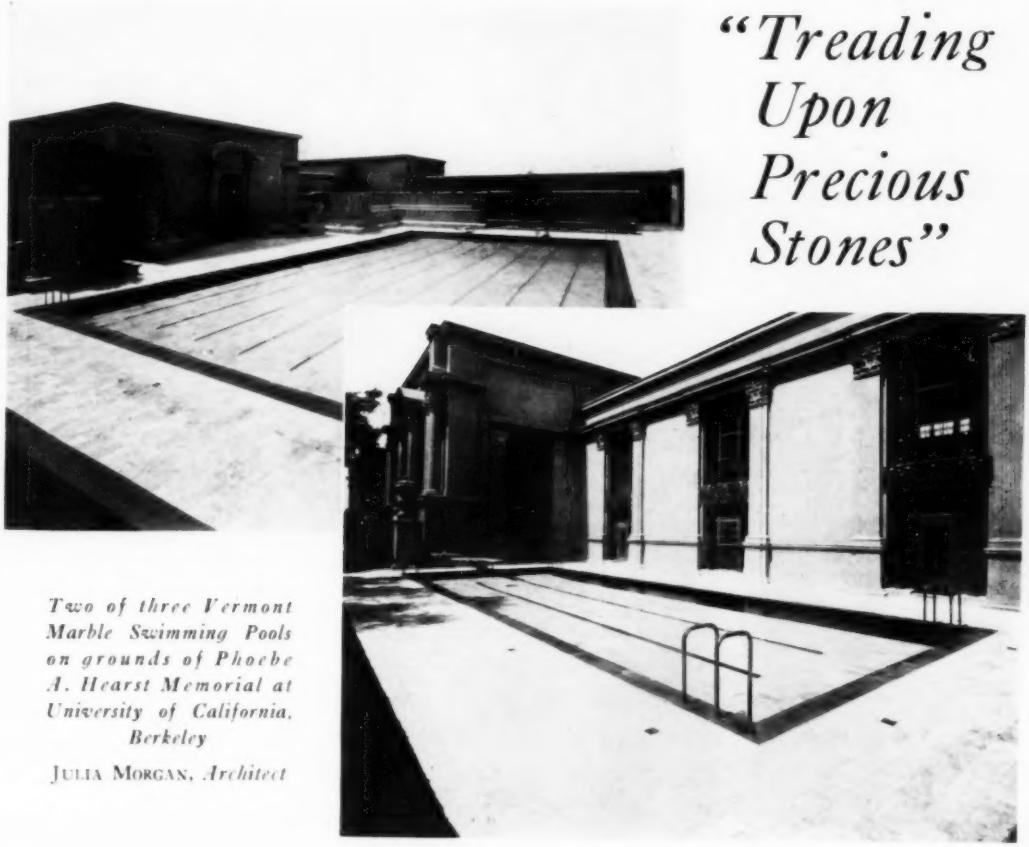
"Treading Upon Precious Stones"



Two of three Vermont Marble Swimming Pools on grounds of Phoebe A. Hearst Memorial at University of California, Berkeley

JULIA MORGAN, *Architect*

That was the way Seneca referred to the marble baths of ancient Rome. He called them an extravagance although he admitted they were delicate and refined.

Modern buyers have learned that marble baths are anything but extravagant. Good marble, due to its low absorption, its cleanliness and its durability, becomes in the long run an extremely economical product.

Within the grounds of the Phoebe Apperson Hearst Memorial, University of California, Berkeley, are three marble encased pools, constructed of Vermont Brocadillo and Verde Antique. This is one of the tested ways for combining beauty and utility.

Vermont Marble Company—Proctor, Vermont

Branches in the larger cities

See Sweet's Catalogue for Specifications and Other Data

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The winner will also receive invaluable publicity in nation-wide advertising as the successful designer of America's most truly representative silverplate pattern.

Our Instruction Book, giving explicit details, will be sent on request. We cordially invite you to write today. Competition closes January 15th, 1929.

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WHAT NEW SPOON DESIGN DO YOU SUGGEST

Can American Genius Create A New Motif in Silverware?

CHARLES DANA GIBSON, Chairman of Award Committee, says—"A unique competition that will appeal to Students and Masters of Art .. to create a silverware design."

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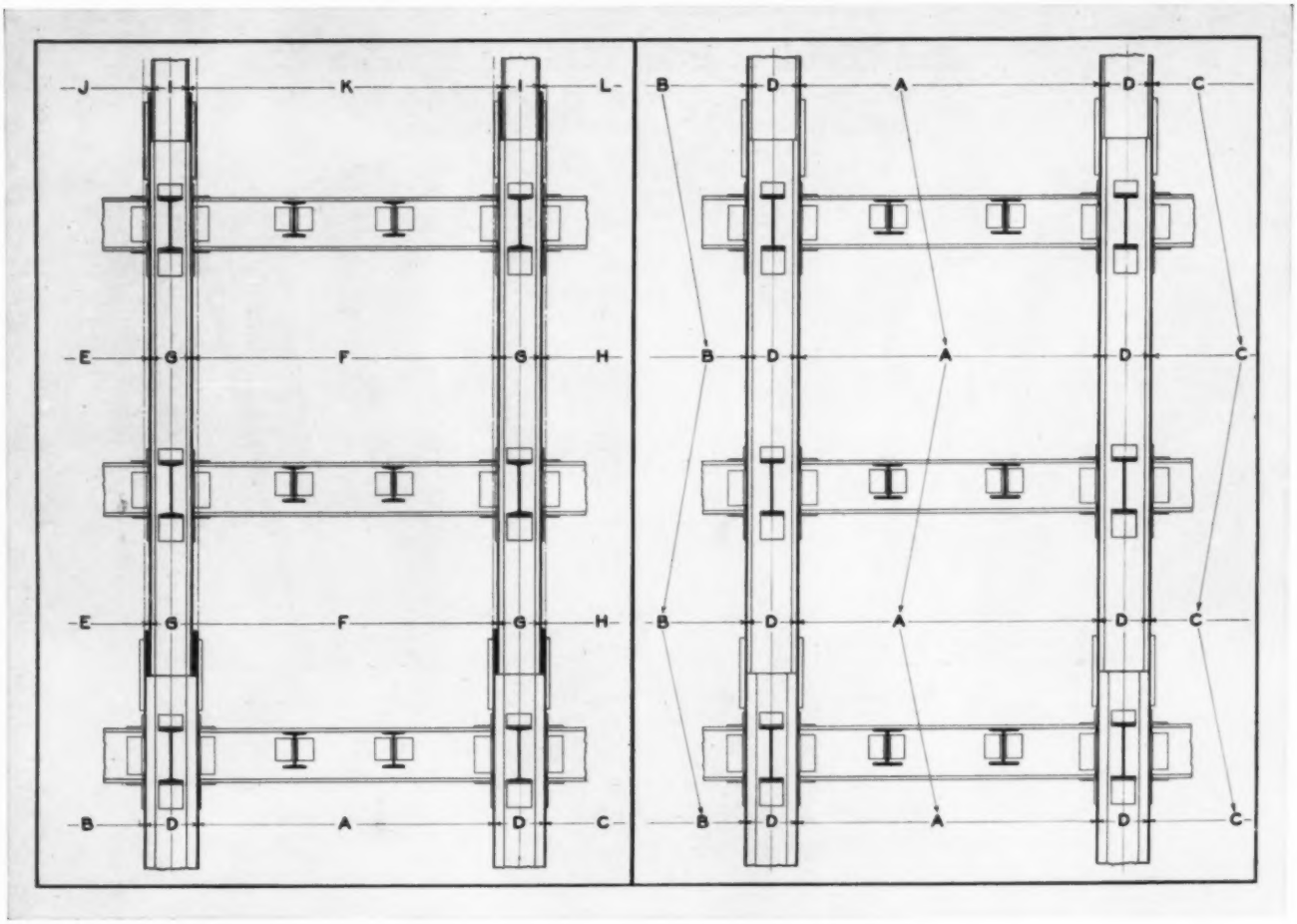

Old Style Columns

in which column depths *D*, *G* and *I* vary with the different weights. This difference in depth causes a variation in beam lengths *A*, *F* and *K*—*B*, *E* and *J*—*C*, *H* and *L* wherever column weights are changed, necessitating additional detailing of the framing members which adds materially to the cost of your design. This variation in beam lengths is further reflected in increased shop and erection costs, as well as transmitting a difference in dimensions to subsequent materials going into the building.

The Constant Depth Carnegie Beams offer all the economies of duplication, rendering much of this labor and expense wasteful and unnecessary.

Modern Columns

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From design to the finished building, the economy afforded by this uniformity presents an opportunity for substantial savings. The new principle of Constant Depth is worthy of your investigation.

Our engineers will gladly cooperate with you on any problems involving your steel requirements. Write for a copy of our handbook—"Carnegie Beam Sections". It will prove of great value.

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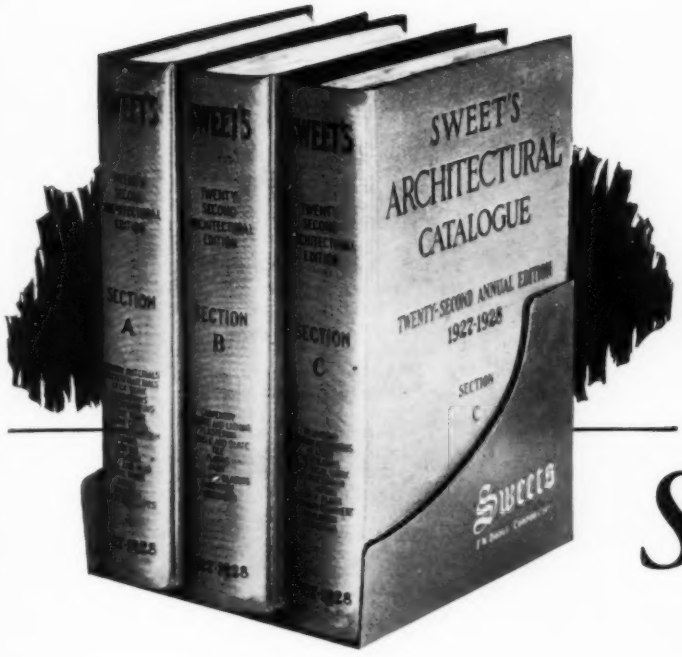

Here in Sweet's, 30 *Standard Colors of* WRIGHT RUBBER TILE

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Wright Rubber Tile has all the qualities characteristic of this type flooring—plus certain exclusive advantages. Prominent architects have given this product their unreserved endorsement. Let us send you complete information that explains why *you* can consistently recommend Wright Rubber Tile in your specifications. Write.

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The annual loss in the United States due to rust is estimated at $600,000,000. This figure is appalling—particularly when you realize that much of the loss is preventable by using equipment made from copper and its alloys.

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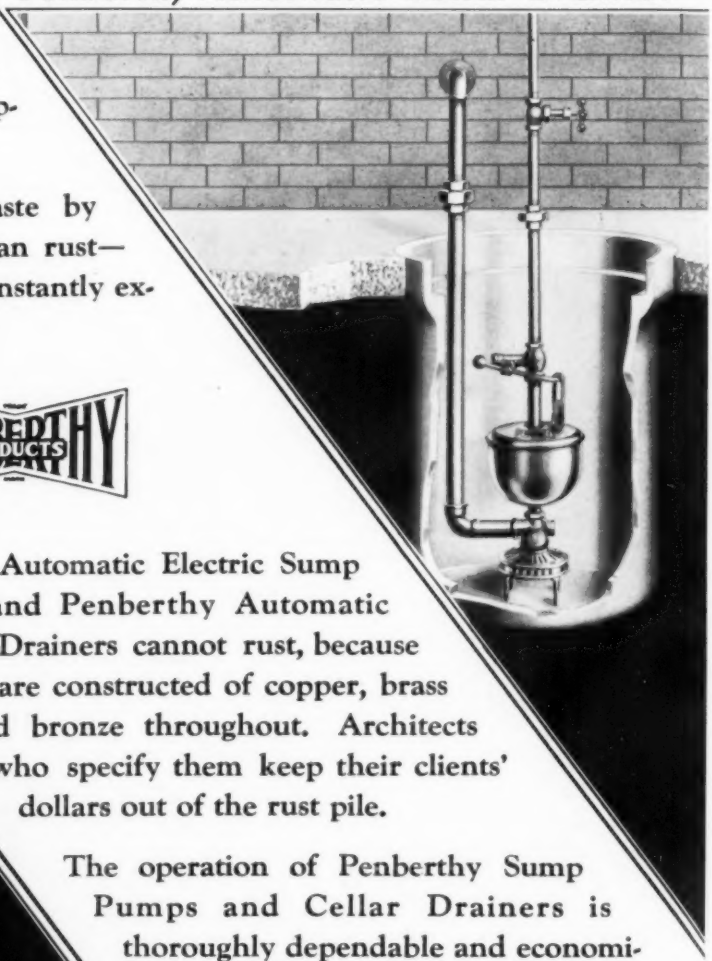

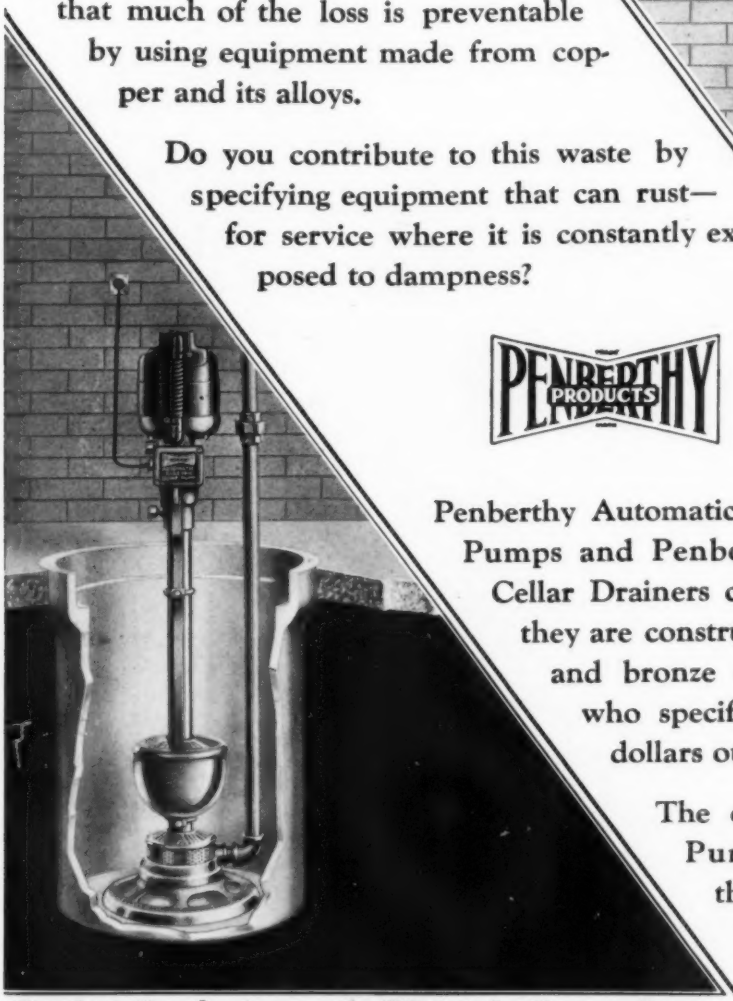

Penberthy Automatic Electric Sump Pump

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Penberthy Automatic Electric Sump Pumps and Penberthy Automatic Cellar Drainers cannot rust, because they are constructed of copper, brass and bronze throughout. Architects who specify them keep their clients' dollars out of the rust pile.

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CANADIAN PLANT WINDSOR, ONT.

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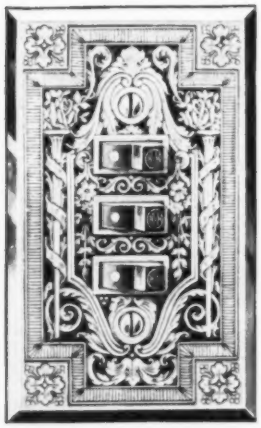

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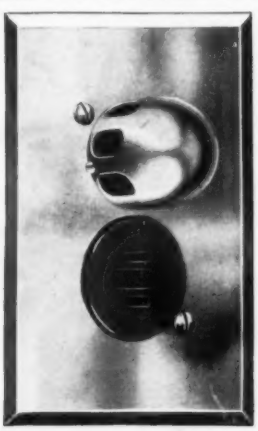
Better utility-value; better decorative value. *Plus* the value of the new idea, in giving your clients the latest suggestions for electrical service. We'll be glad to supply supplementary data to that below.



H & H Unified Devices

Tumbolier Switch No. 21096; 3 levers for 3-circuit control. *See illustration* in upper left corner. (Also furnished for 2-circuits, No. 21095).

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Send for new *Catalogue "T"* and see the latest in *ALL* needed Wiring Devices.

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HARTFORD, CONN. MAKERS OF ELECTRIC SWITCHES SINCE 1890

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PARTITIONS for Buildings of all kinds . . .

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Beautifully fashioned . . . slender posts, wide panels, all means of assembly concealed, no screws, a smooth unmarred appearance. Colorful, too, warm tans and browns, soft grays and refreshing greens; rich graining effects . . . a modern touch for the business home.

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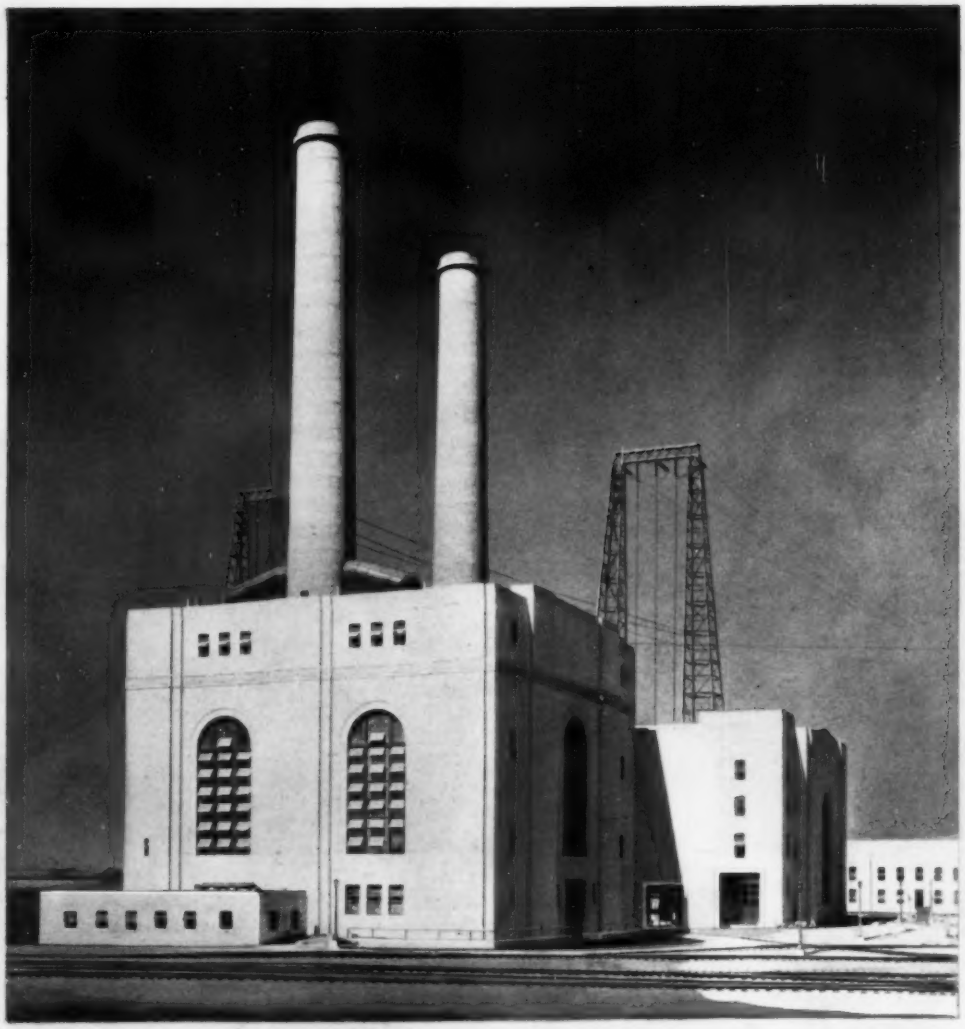

SOUTHERN CALIFORNIA EDISON COMPANY
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THE simplicity of line in this modern power station suggests strength and beauty. A striking balance is achieved without the use of cornices.

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But unlike most other dollars, the value of the fence dollar is little understood. Buyers, unfamiliar with fence materials and fence erection, often accept specifications such as height of fence and measurements of parts, as an accurate yardstick of value. Frequently, too, they compare prices with a finality that leaves little room for consideration of quality.

On this basis, no fence dollar can buy maximum value. Specifications have many fatal loop holes. Samples may side-step a multitude of sins. Prices are never a reliable guide.

To judge fence properly, you must step outside the dangerous triangle of specifications, samples and prices and gather facts on many other essential points. Find out about weights of materials, shape and size of posts, design of gates, depth and shape of concrete post foundations. Make sure that fresh, new materials will be used. And, of utmost importance, who will erect the fence? Will it be a neat, workmanlike, first-class installation? Can the company who sells the fence take Complete Responsibility?

Cyclone Fence has become the nation's standard by right of its inherent quality. Cyclone Fence is priced reasonably low yet Cyclone never has been, and never will be, a "price proposition."

Call a Cyclone Representative

Learn why Cyclone Fence provides property protection at lowest cost per year — maximum value for every dollar invested. Cyclone factories, warehouses, and direct factory branches are located at points throughout the United States to afford quick, competent, complete service in every locality. Wire, phone or write nearest offices.

Fencing for factories, schools, playgrounds, residences, estates, property of all kinds.

Cyclone Fence
REG. U.S. PAT. OFF.

CYCLONE FENCE COMPANY, *Main Offices*: Waukegan, Ill.
Works and Offices:
North Chicago, Ill., Greensburg, Ind., Cleveland, Ohio, Newark, N. J., Fort Worth, Texas, Tecumseh, Mich., Oakland, Calif., Portland, Ore.
Direct Factory Branches: Atlanta, Baltimore, Buffalo, Charlotte, Cincinnati, Des Moines, Detroit, Hartford, Conn., Houston, Indianapolis, Jacksonville, Fla., Kansas City, Mo., Milwaukee, Mineola, N. Y., Minneapolis, Mount Vernon, N. Y., Philadelphia, Pittsburgh, St. Louis, Syracuse, Toledo, Tulsa.
Pacific Coast Division: Standard Fence Company, Oakland, Los Angeles and San Francisco, Calif., Portland, Oregon, Seattle, Washington.

EQUITABLE TRUST COMPANY BUILDING
NEW YORK CITY
Architects: Trowbridge & Livingston, New York City
Engineers: Meyer, Strong & Jones, New York City
Plumbing Contractors: W. G. Cornell Company, New York City
Heating and General Contractors:
Thompson-Starrett Company, New York City

NATIONAL

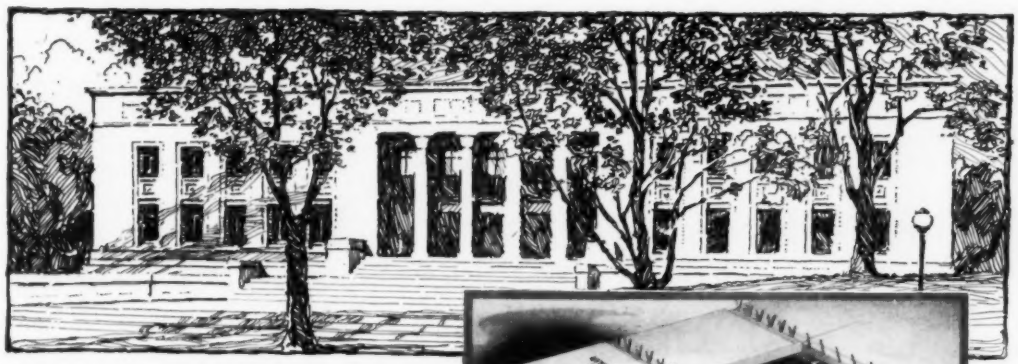
AT THE WORLD'S FINANCIAL CENTER

ACROSS the street from where the first President of the United States took oath of office, and on one of the most valuable pieces of land in the world, a new and magnificent structure now towers far into the air.

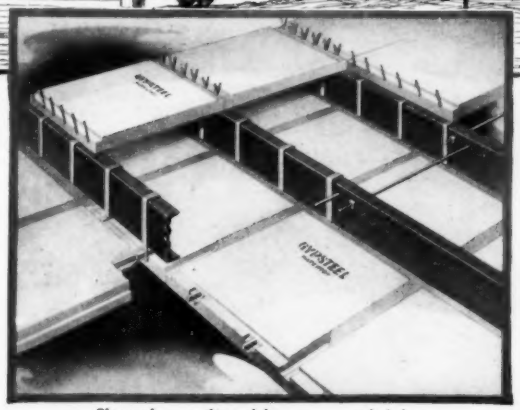
Within the shadow of its casting are the world's most famous financial headquarters. Here will stand another landmark created by master minds of the architectural and engineering professions—emphasizing modern beauty and efficient design.

Responsibility for such structures rests heavily. Every selection of materials will challenge the wisdom of their sponsors as time determines their service quality, adequacy and durability. Many miles, many tons, of "NATIONAL" Pipe have now become an integral part of this building. The reputation for general dependability, consistently appearing throughout tubular history from the earliest days of pipe making, gives every promise that this piping bears the same ratio to successful performance as the building itself.

NATIONAL TUBE COMPANY, PITTSBURGH, PA.
District Sales Offices in The Larger Cities



Buffalo Museum of Science, Buffalo, N. Y. Esenwein & Johnson, Architects. Felton Construction Co., General Contractors. Gypsteel Pre-cast floors and ceilings throughout.



Shows how ceiling slabs are suspended from beams by sturdy hangers.

They Saved $12,000 *over cost of* Concrete Floors

When the bids came in,
Gypsteel floors saved $12,000.

When erection started,
floors grew with magic speed. No form work needed. Factory made slabs reached the job dry, ready to erect.

When the blizzard came,
all other work stopped, but the laying of Gypsteel floors went on regardless.

When ceiling slabs were hung,
they were ready for plaster. No forms to drop. No wait for drying out. No plaster *scratch* coat required.

When they finished the floors and ceilings,
the work was two and a half months ahead of schedule. A dry job. *A fast job.* A winter job.

A flat ceiling job.
A thoroughly fire-proof construction. $12,000 in money and two and a half months in time saved, because the architects knew about Gypsteel.

NOTE THIS

Sweet's has four pages on Gypsteel. For smooth architectural ceilings, use Gypsteel Pre-cast Floors.

If showing of beams no objection, use Gypsteel Poured-in-place Floors.

For light weight fire-proof roofs, Gypsteel 30 in. or long span Pre-cast Slabs.

For sound- and fire-proof partitions, Gypsteel Hollow Partition Tile.

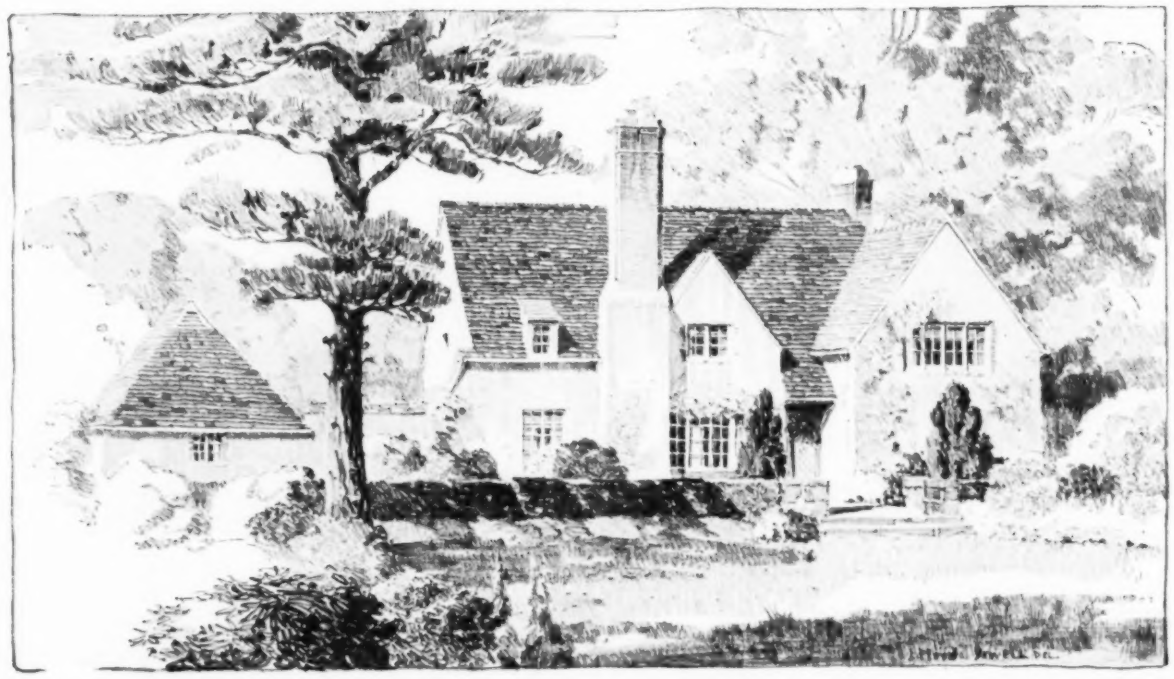
Motor truck deliveries to New York District from Linden, N. J., factory; to Buffalo District from Akron, N. Y., factory.

General Offices
Linden, N. J.

STRUCTURAL GYPSUM CORPORATION

Sales Offices
in Principal Cities

GYPSTEEL



These Shingles Contribute to the Distinction of Fine Homes

Appearance is the first consideration of a roof if the architectural effect is to be right. But length of life and fire resistance are important too. These three elements are happily combined in Johns-Manville Asbestos Shingles. Thick, substantial, pleasing in texture, and furnished in a wide variety of colors, J-M Shingles make it possible to achieve any desired color effect.

It is exceedingly satisfactory to be able to select a roofing material which thus fits into the scheme, but which is absolutely fireproof and literally everlasting. When you specify Johns-Manville Asbestos Shingles you have given your client a roof which he will never have to replace, and in the appearance of which you can share his pride.

We will be glad to send samples of Johns-Manville Asbestos Shingles to any architect. *Address Architects' Service Section, Johns-Manville Corporation, at New York, Chicago, Cleveland or San Francisco.*

MASTER *of* ASBESTOS

Johns-Manville

ASBESTOS SHINGLES

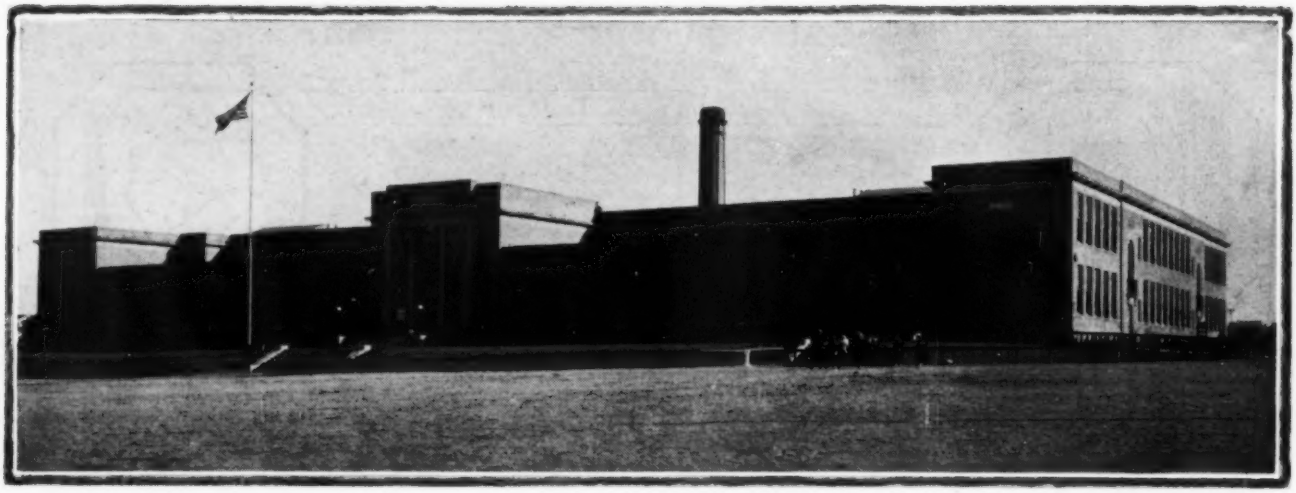
In Full Color

TERRA COTTA, happily, has removed the necessity for the drab silhouette. No longer are architects limited to cold, neutral shades in designing modern structures. Color is rapidly taking its logical place in the beautification of American cities.

In Northwestern Terra Cotta the range of color is unrestricted. Whatever tone, from the palest tint to the richest shade, best expresses the designer's feeling and most effectively accentuates the grace of form, is made available by our laboratories. The importance of polychrome terra cotta in the production of finer exterior ornamentation and in the decoration of interiors is appreciated by the thinking architect.

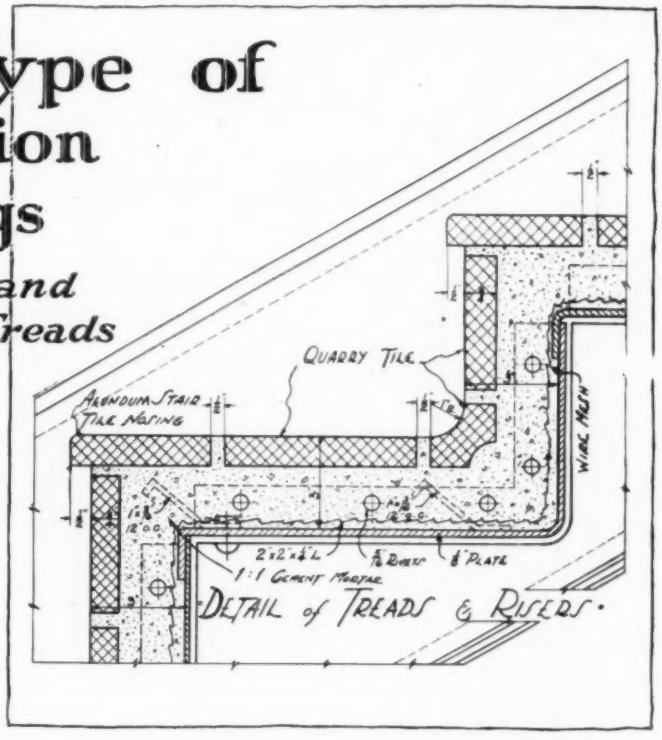
THE
NORTHWESTERN
TERRA COTTA
COMPANY

DENVER · CHICAGO · ST. LOUIS



An Effective Type of Stair Construction for School Buildings

Providing Safe and Wear-Resisting Treads



IN the schools of a prominent mid-west city this type of stair construction has been used for several years. The architects of the school board have found that the Alundum Stair Tile nosing provides an exceptionally effective tread.

It is permanently non-slip and has no grooves nor corrugations to cause tripping. Its extreme resistance to wear eliminates maintenance expense.

NORTON COMPANY
WORCESTER, MASS.
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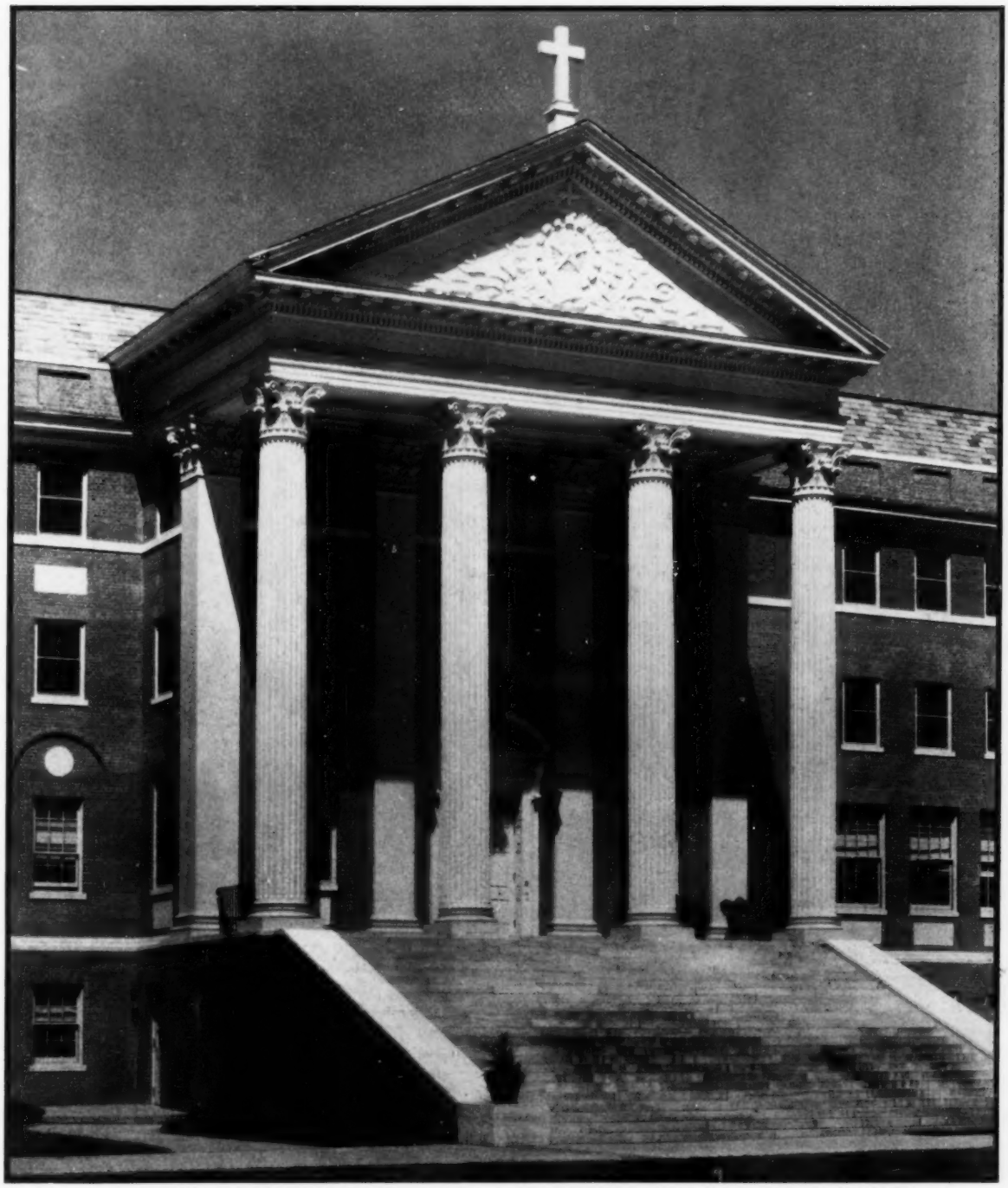
T-220

NORTON FLOORS
Alundum Tiles Treads & Aggregates



LaSalle Military Academy, Oakdale, L. I., New York. James W. O'Connor, Architect. Entrance, including columns, by Hartmann-Sanders

Good taste . . . beauty, style . . . America today expects it; *demands* it as never before. Hartmann-Sanders considers it a compliment that they are permitted to work with many leading architects in their efforts to create homes and other buildings of greater distinction and style. Interpreting faithfully the architect's details; understanding from long experience his viewpoints; Hartmann-Sanders craftsmen are available for the creating of fine columns, entrances, mantels and many other interior and exterior features. Catalog R47 of Columns or Catalog R53 of Model Entrances gladly sent on request. Hartmann-Sanders Co., 2152 Elston Avenue, Chicago. Eastern Office and Showroom: 6 East 39th St., New York City.

HARTMANN-SANDERS

Pergolas **Colonial Entrances** **Koll**
Rose Arbors **Garden Equipment** **Columns**

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Dr. George W. Cottis Residence
Jamestown, New York

Johnson & Ford
Architects

A CHEERFUL GLOW illuminating the windows on a winter's night is a true reflection of warmth within, where the house is equipped with International Metal Casements. For these are guaranteed weatherproof when installed by International erectors.

INTERNATIONAL CASEMENT Co INC

JAMESTOWN, NEW YORK

AGENTS IN PRINCIPAL CITIES

IN CANADA: ARCHITECTURAL BRONZE & IRON WORKS, TORONTO, ONT.

Said the Owner:

"The next roof I put on will be . . . . . ."

That man didn't start right

Had he put on a Sheldon Slate Roof to begin with, he would never have had the problem of a "next" roof.

For a Sheldon Slate Roof

lasts as long as the building; becomes more beautiful with age, and the Owner never either needs or wants another.

Four Particularly Excellent Sheldon Roofs:

Olde English Architectural Slate Combination No. 12.
Semi-Weathering Green and Grey (in commercial thicknesses).
Arabian Red (any form, for roofing and flagging).
Heather Combination (for the modest-price residence).

All these are Exclusively Sheldon

Please ask for illustrations of all four of these Sheldon Roofs, in natural colors. Any other help you may need will be cheerfully given.

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—no loss

Specify

THERE is little likelihood that the clouds will ever let loose such a torrent upon a cement sack as flows from the hose in this picture. But whether there be sudden storms or other destructive air-moisture, cement packed in Bates Multi-Wall Paper Bags is always dry.

Protected by the 5 separate paper walls of Bates Bags, cement and plaster can safely be delivered any time and stored anywhere. Bates Bags thus help to keep the job up to schedule and ensure the use of full-strength materials.

These modern, strong and moisture-resisting containers are made by the Bates Valve Bag Corporation, the original and largest manufacturers of multi-wall bags. This company owns and operates 9 modern bag plants in the United States and Canada.

BATES VALVE BAG CORPORATION
General Offices: 35 E. Wacker Drive, Chicago

BATES Multi-Wall PAPER BAGS

No. 10 OF A SERIES.—THE CONTRIBUTIONS OF BATES MULTI-WALL BAGS TO THE BUILDING INDUSTRY

Toncan window frames and sash installed in 1911 in the famous Grand Central Palace in New York City are still in good condition. Architects: Warren and Wetmore. Builders: James Stewart & Co.

Defeating Time
with Rust-Resisting TONCAN IRON

ONLY time can tell the life of materials used in the construction of buildings. Rust and corrosion, arch enemies of sheet iron, require years to complete their activities. Therefore, to determine the best material to use, it is necessary to employ accelerated tests to speed up time. True, such tests will not determine the exact life in service, but they will indicate the comparative value of ferrous metals in resisting rust and corrosion.

Results of accelerated hydrochloric acid tests—one of the accepted methods widely used — definitely prove the superiority of Toncan Copper Mo-lyb-den-um Iron. They show that this Super-Iron lasts many times as long as comparable metals and in fact is the long-lasting ferrous metal in its class.

Consequently, leading architects are now specifying durable Toncan Iron for sheet metal work of every structure they design. It is used for gutters and downspouts, ventilators, cornices, ventilating ducts, metal lath, window frames and many other important building parts.

Write for our new book on sheet iron. It contains practical information of value to every architect.

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TONCAN
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CENTRAL ALLOY STEEL CORPORATION, MASSILLON, OHIO

Mills: Canton and Massillon, Ohio
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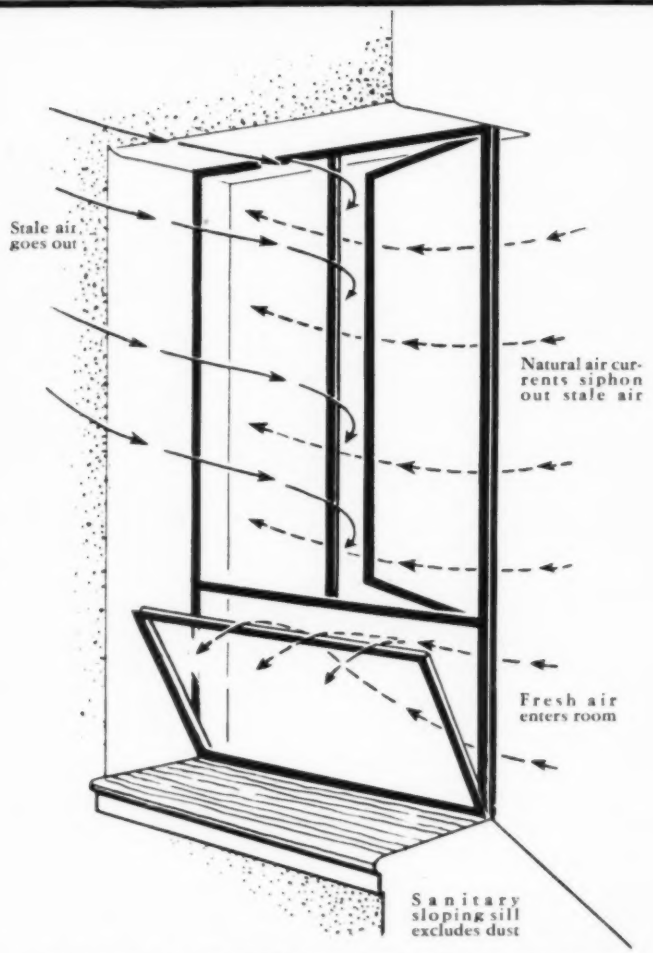
WORLD'S LARGEST AND MOST HIGHLY SPECIALIZED ALLOY STEEL PRODUCERS

The perfected WINDOWS *of* STEEL *for Office Buildings*

1450 Lupton Combination Casements are being installed in the 31-story Smith-Young Tower, San Antonio, Texas. A. B. & A. M. Ayres, Architects. McKenzie Construction Company, Contractors



CONTROLLED VENTILATION

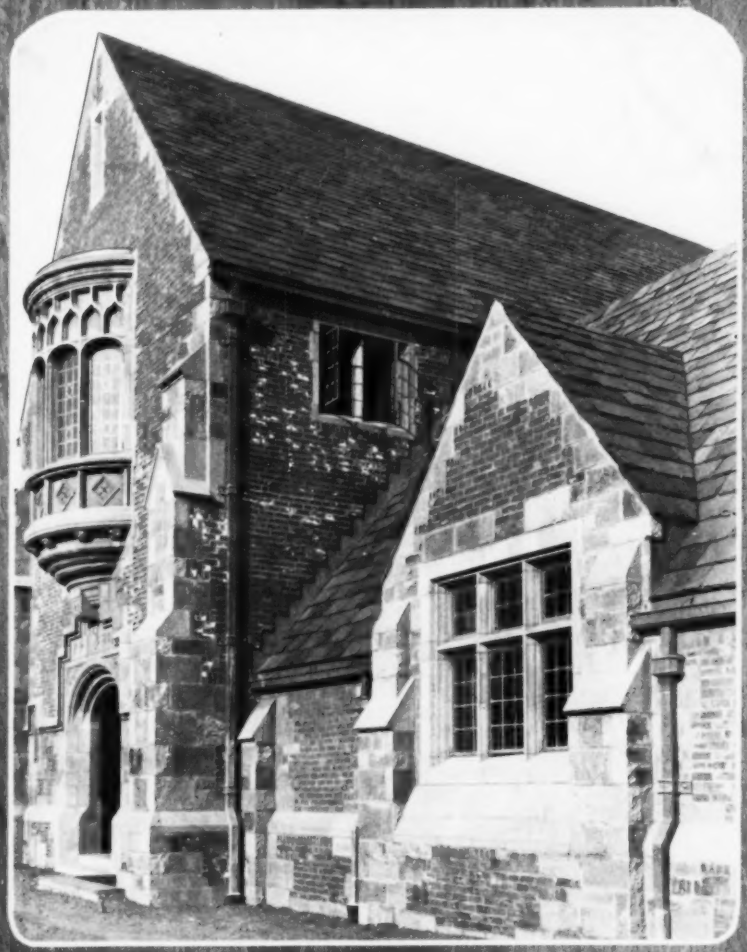
LUPTON Combination Casements set a new high standard of natural ventilation in multi-story buildings. The controlled ventilation and abundance of fresh air they provide give real comfort to building occupants.

The projected ventilator movement, originated by Lupton fifteen years ago, has reached the maximum efficiency of application in these new and perfected windows.

Already architects and engineers are installing these new Lupton Combination Casements in many notable office buildings. Send for Catalog P-50 which completely describes these windows.

DAVID LUPTON'S SONS COMPANY
2209 E. Allegheny Ave., Philadelphia

Lupton STEEL Windows



Zeta Psi House
Yale University

Everett V. Meeks
Architect

Tudor Stone Roofs

This building, designed by the Dean of the School of Fine Arts, Yale University, is one of a number of fraternity houses recently completed at New Haven, and equipped with Tudor Stone Roofs.

Rising and Nelson Slate Company

WEST PAWLET, VERMONT

Architects' Service Department: 101 Park Avenue, New York City

Walter McQuade, Consulting Architect

CHICAGO DETROIT PHILADELPHIA BOSTON

Ohio White Finish used in the Chamberlin-Vanderbilt Hotel, Old Point Comfort, Va. Marcellus E. Wright, Architect. Wise Granite & Construction Co., General Contractors. Hickman Plastering Co., Greensboro, N. C., Plaster Contractors.

The Renaissance *of an* Ancient Art

THE modern trend toward finer plaster work—textured surfaces, molded designs, artistic decorations—are but the outward evidence of a Renaissance of an Ancient Art.

The Ancient Art of Plastering. And in recreating the plaster achievements of bygone eras, the modern plasterer, too, goes back to the age-old reliable plaster material—hydrated finishing lime. This material, in base coats, gives protection to modern metal plaster bases and builds up a structure for absorbing and deadening sounds. In the finish coat it produces a velvety, pure white surface of unusual acoustical value.

In short, the architect can, with Hydrated Finishing Lime, be sure of a beautiful, durable, sanitary, and economical plaster finish, capable of receiving a wide range of texture and decorative treatment.

OHIO HYDRATE & SUPPLY COMPANY
WOODVILLE, OHIO

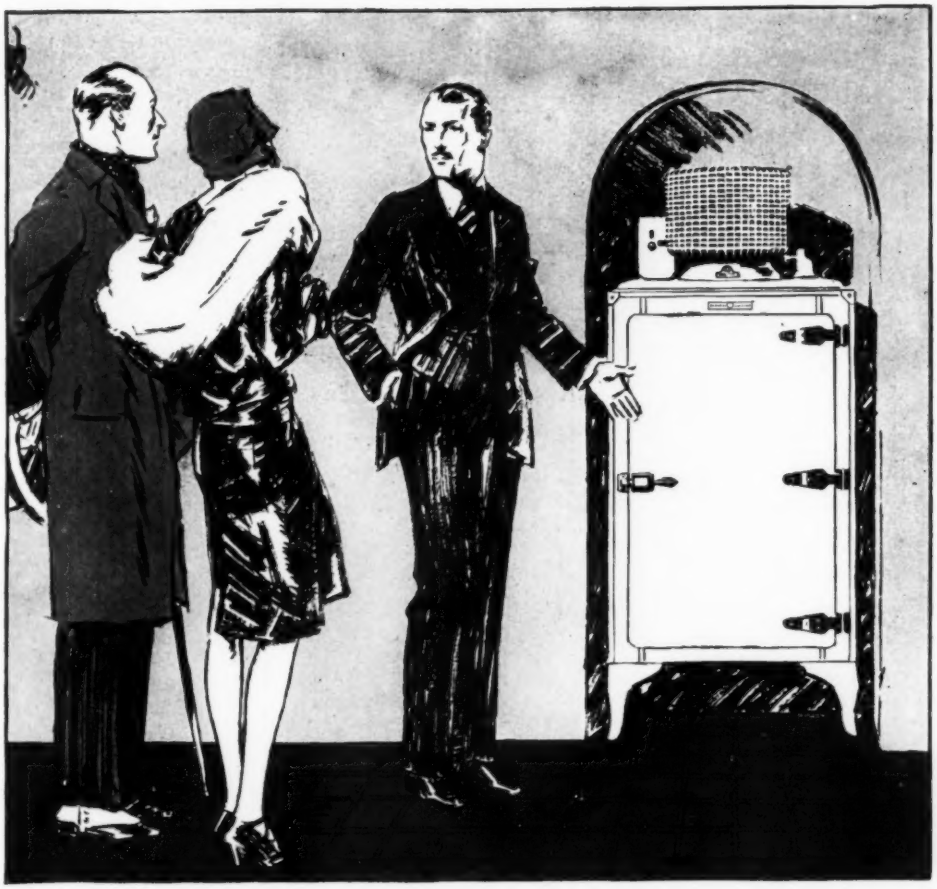
Charter Member of the Finishing Lime Association of Ohio

For BETTER PLASTER Specify OHIO WHITE FINISH

Send for our booklet, "Finishing Lime," or refer to page B1336 Sweet's Architectural Catalog.

The *original* Ohio White Finish is made from the famous pure dolomitic limestone found only in a limited territory in northwestern Ohio of which Woodville is the center. It is marketed under four different brand names. All are of equal quality—specify any one of them by name and you will be sure of a plaster material of superior quality, if packed in the bags with the Red Zig Zag border. These are the brands—"Ohio"—"Hawk Spread"—"Woodville"—"Buckeye."

Thanks to the builder!



"YES, the man who planned and erected this building persuaded me to put a General Electric Refrigerator in each apartment. He designed the kitchen spaces to fit.

"I thank him for his suggestion because it has so greatly speeded up the renting of the apartments. And it has caused much favorable comment from the tenants who are already in. They speak of these quiet, worry-free, automatic refrigerators as a special comfort.

"They are supremely simple and easy to install. All their mechanism is sealed in an air-tight steel casing. They never need oiling. They operate with unusual quietness—and use little current.

"One of the things which greatly influenced my choice was the fact that these refrigerators are made and guaranteed by General Electric."

If you want complete specifications of the various models, just ask us for Catalog AR-12. Or for this information in a briefer form, see pages C 3056-9 in Sweets' Architectural Catalog.

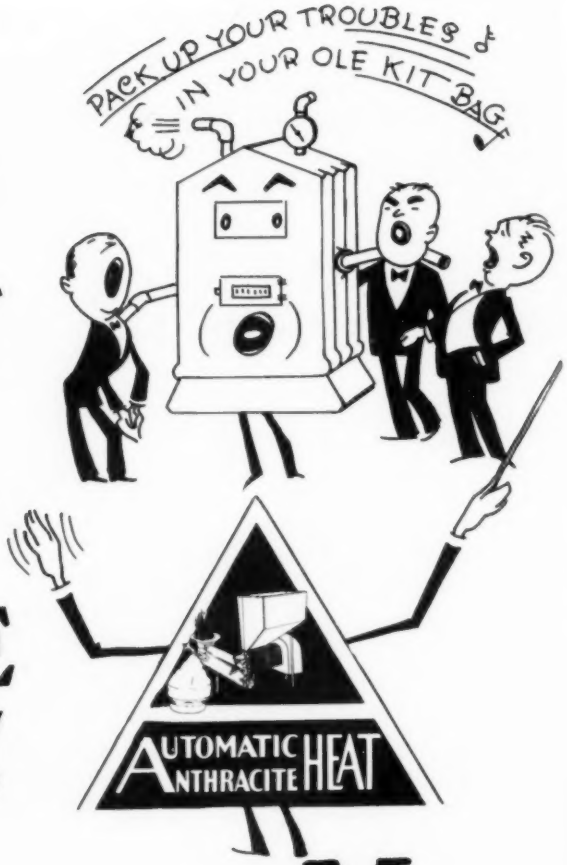
GENERAL ELECTRIC

Refrigerator

"Makes it Safe to be Hungry"

ELECTRIC REFRIGERATION DEPARTMENT · OF GENERAL ELECTRIC COMPANY · HANNA BUILDING · CLEVELAND, OHIO

No WORRIES about SAFETY with Automatic ANTHRACITE Heat – and The Electric Furnace-Man



SAFETY—that's the first consideration—more important than all else in selecting an automatic heating system.

Convince yourself first that the fuel is safe under all conditions.

The briefest investigation will prove to you that ANTHRACITE is the SAFE FUEL. With the Electric Furnace-Man ANTHRACITE gives you automatic uniform heat without danger, smoke, smudge or odor. ANTHRACITE becomes the Perfect Modern Fuel—Safe—Clean—Efficient—Economical.

The Electric Furnace-Man burns the lower priced buckwheat or rice sizes—automatically feeding coal to the fire-pot and removing ashes to a dust-tight container. *It pays for itself out of savings.*

Have you seen it operate? That's the fascinating part of it. The entire system is in sight! You can see the fuel—watch it feed—watch it burn. Nothing hidden to wonder and worry about. Nothing to cause deterioration in furnace or boiler.

For any size home and any system—steam, vapor, warm air or hot water. Now on demonstration everywhere. Authorized distributors in principal cities.

Also for hot water supply - any heating purpose

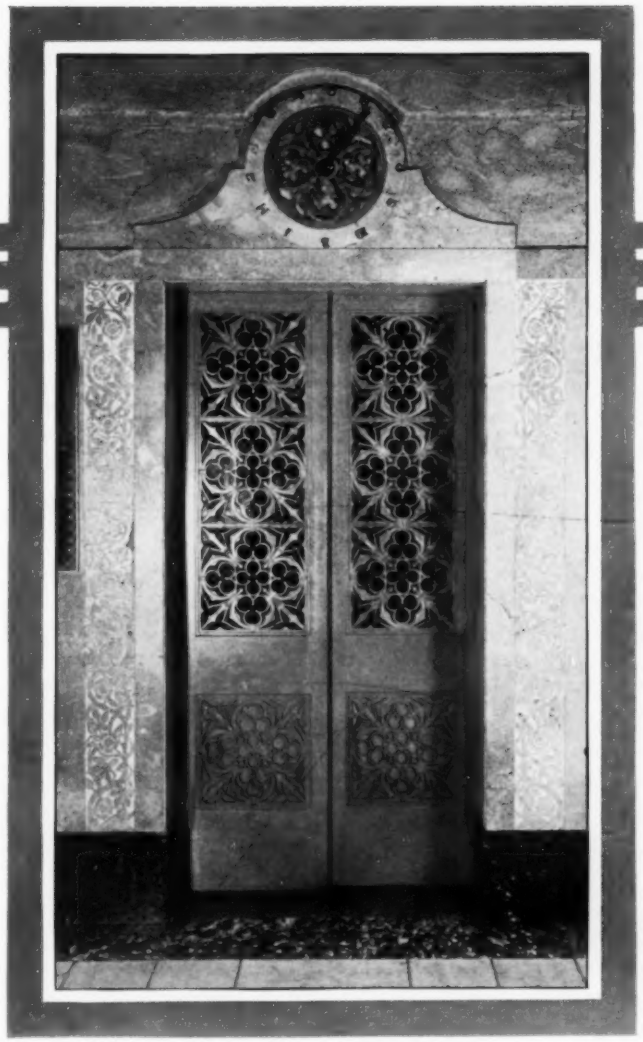
PATENTED PRODUCT OF

DOMESTIC STOKER COMPANY

Gillespie Bldg., Seven Dey Street, New York

WARNING! Do not be misled. The Electric Furnace-Man is known by no other name. Be sure you get the genuine, manufactured only by the Domestic Stoker Company, of 7 Dey St., New York, and sold only through authorized distributors and dealers.

Look for our name and trade-mark and beware of substitutes



Elevator enclosures in the Elks Club Lodge, Memphis, Tennessee.

GEORGE MAHAN, JR.
Architect

"Unwritten" Specifications

WHEN a product is built to order, the most exact specification still leaves something to the judgment and good sense of the builder.

In the long and somewhat hazardous journey from the original specification to a safe and satisfactory installation, Thorp gladly accepts the implied responsibility of making a product that will be a sympathetic rendering of the architect's unexpressed wishes.

Whether this means a close following of explicit instructions or the creation of an original design, the finished job will be "as specified".

THORP FIRE PROOF DOOR COMPANY
MINNEAPOLIS, MINNESOTA

Specify THORP DOORS

79 E. 79th Street. Electus D. Litchfield, Architect. Clark, MacMullen and Riley, Heating Engineers, E. Rutzler, Heating Contractor. A new apartment in which 120 Robras radiators were used.

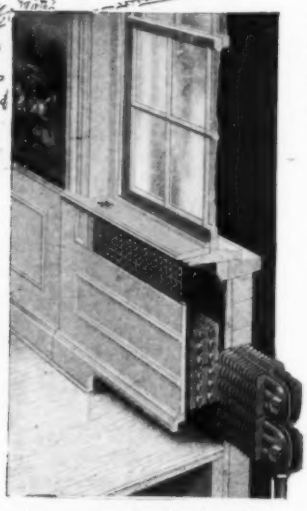
How and *Why* They Use ROBRAS 20-20 RADIATORS

SIMPLY stated it's just this. They use ROBRAS 20-20 Radiators in the walls, under the windows, or in any out of the way place. The reason is that there, they are out of sight, out of the way. They cannot throw dust and dirt upwards on the walls and windows.

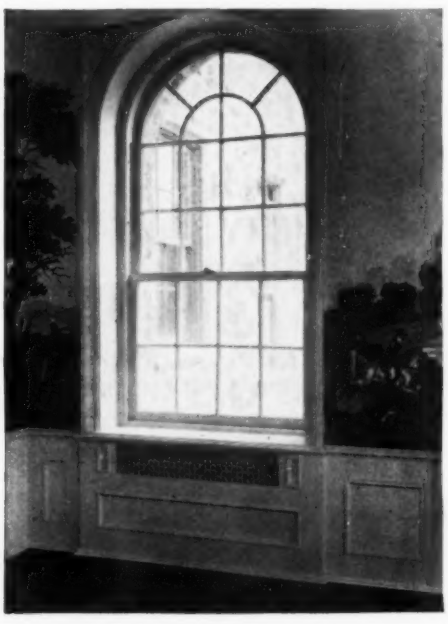
You say that doesn't appeal to owners?

Oh yes it does, because owners know it appeals at once to tenants. No radiators in the way of furniture and draperies! One owner found that ROBRAS 20-20 Radiator equipped apartments "rented with surprising ease." Then too, these ROBRAS 20-20 Radiators need no painting or other upkeep.

Everywhere now, people want ROBRAS 20-20 Radiators in the walls and out of the way. For technical information you are referred to Sweet's, your A. I. A. File, or to our engineers.



Cross-section showing how the finned sections of the Robras 20-20 Radiators inter-lock so as to fit in a 4″ recess.



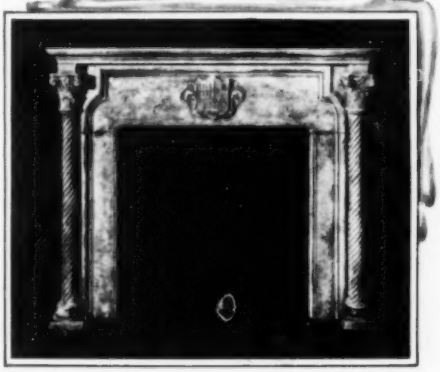
Manner of concealing the radiators. They are out of the way and out of sight.

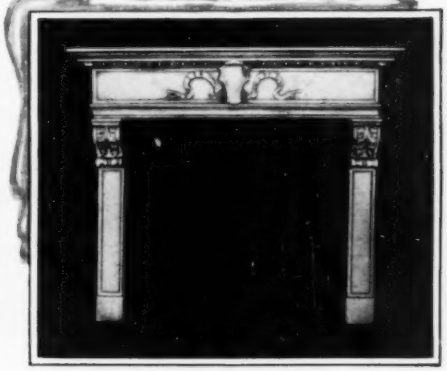
ROME BRASS RADIATOR CORPORATION

ONE EAST FORTY-SECOND STREET ~ NEW YORK CITY

Beauty that is *Poured!*

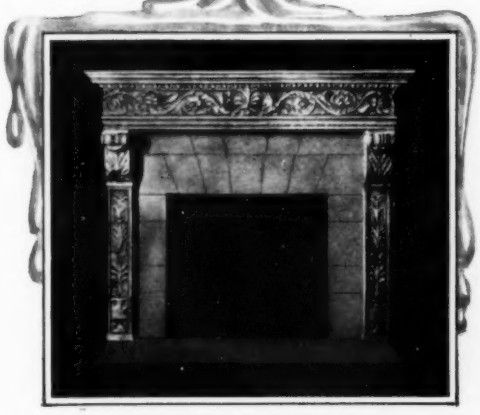
THE strength and beauty of Cretan Stone Mantels render the facts of their making process almost incredible. But it is true that Cretan Stone is synthetic; that before it assumes the form of a beautifully designed mantel it is actually *poured* into moulds. Yet the finished product possesses all the ruggedness and carved loveliness of natural Roman and Grecian stones. ¶ Cretan Stone offers the architect and builder unlimited possibilities in design, appearance and economy. Its lightness in weight is worth considering in connection with shipping and setting-up. ¶ Send for photographs of the variety of designs available, or let us estimate on Cretan Stone Mantels executed from your own detail.





CRETAN STONE

Poured Mantels



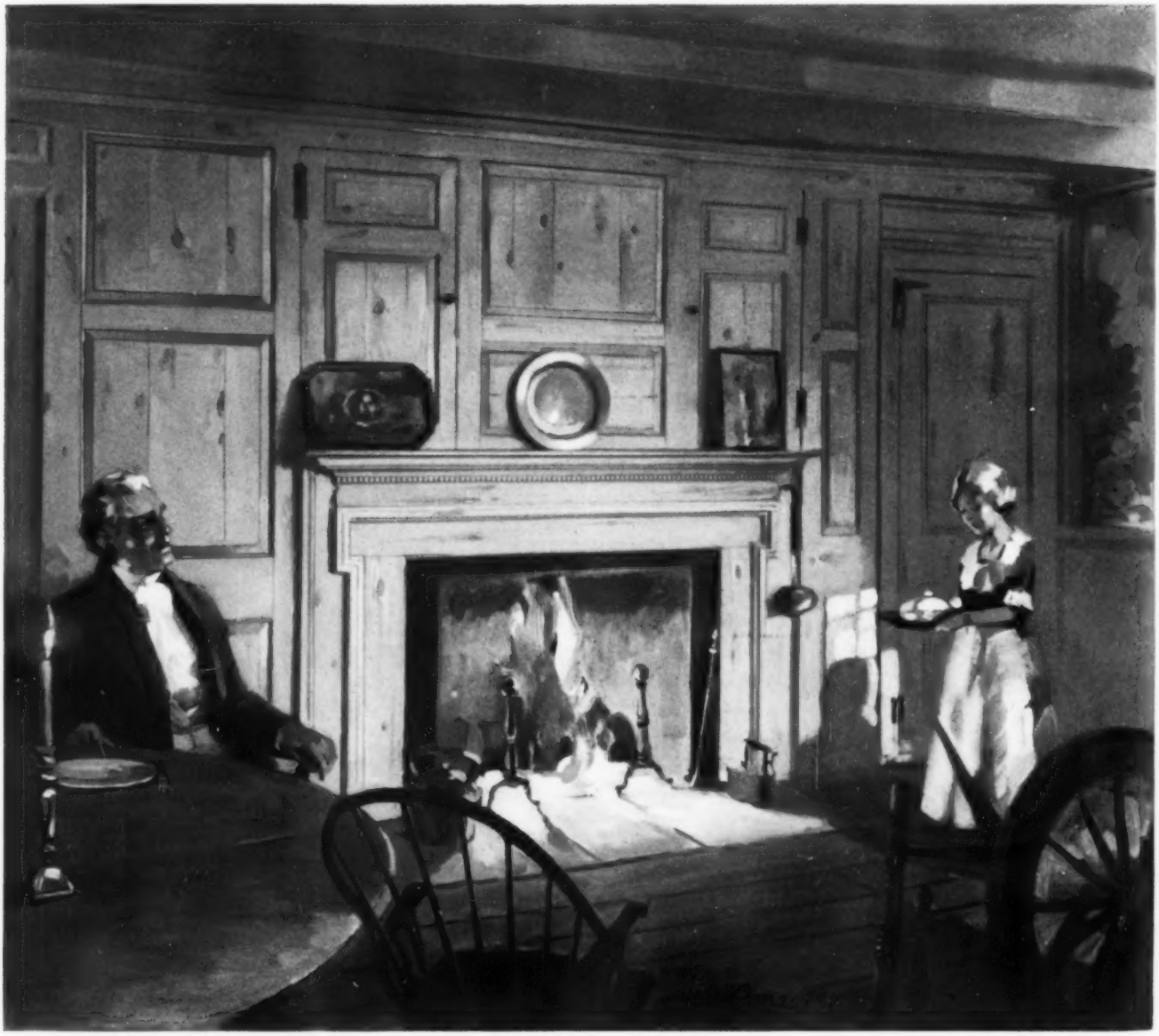
WM. H. JACKSON COMPANY

2 WEST 47 TH STREET NEW YORK

318 N. MICHIGAN AVE. CHICAGO

ESTABLISHED IN THE YEAR 1827

THE OLDEST HOUSE OF ITS KIND IN AMERICA



Pine Construction is the Most Economical

THE modern trend in home construction away from the raw, cold plastered walls to the rich, warm Pine panelled walls, which grow more attractive as the years pass, is an indication of the study made by architects and builders to obtain, economically, the most in home enjoyment for their clients.

The illustration above shows the Pine panelled walls in the dining room of the Webb House which was built about 1753 at Wethersfield, Connecticut. Since early colonial days, dwellings

SHEVLIN PINE

The Governor Wolcott House, built in 1753 and the oldest house now standing in Litchfield, Connecticut, is a convincing example of the economical long life of Pine construction.

built of Pine have given the most years of real home comfort for each dollar expended.

There is no shortage of the proven building material of our ancestors as there are sufficient stands of carefully selected Shevlin Pine to build the nation's homes for decades.

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There is no guesswork about a home properly constructed of Shevlin Pine. The nation's oldest homes testify to the centuries of service given by Pine like this—real American homes like the Governor Wolcott House shown on this page which was built for one of the signers of the Declaration of Independence.

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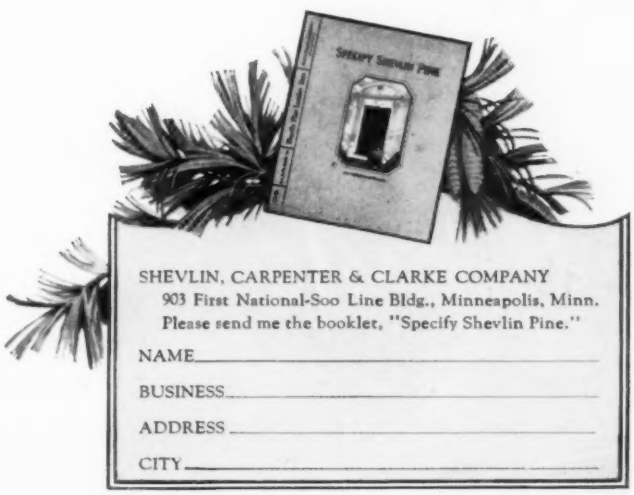

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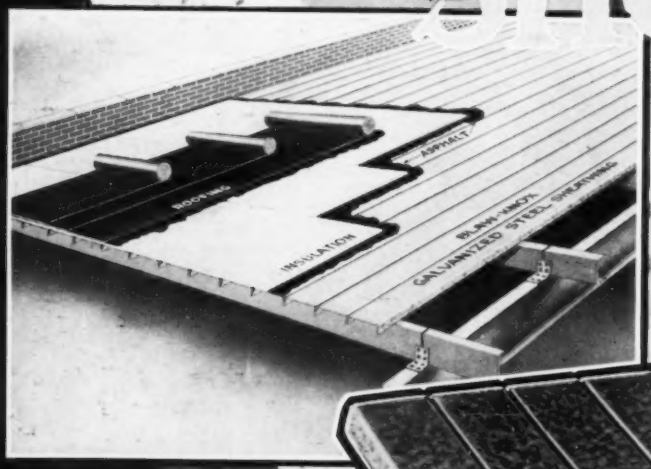

A LIGHTWEIGHT steel roof sheathing for flat roof buildings. Furnished in 24, 22 and 20 gauge material. Spans 3′ 10½″ to 8′ 3″. Nonburnable, galvanized to resist rust. Light in weight. Strong and impervious to dampness. Easily and cheaply erected — permanent. Can be used with any good insulation or roofing. Permits less dead load on the structural framework.

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Electric CALCULATOR

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Casa Del Rey Apartment Hotel at Haverford, Pa. Rendering by A. Thornton Bishop; Thomas Lippincott, architect; Charles Schaff, associate architect.

Ampinco

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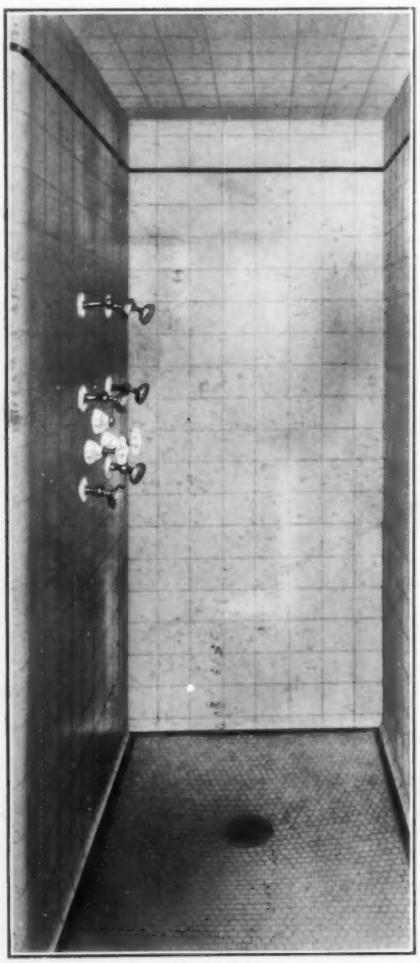

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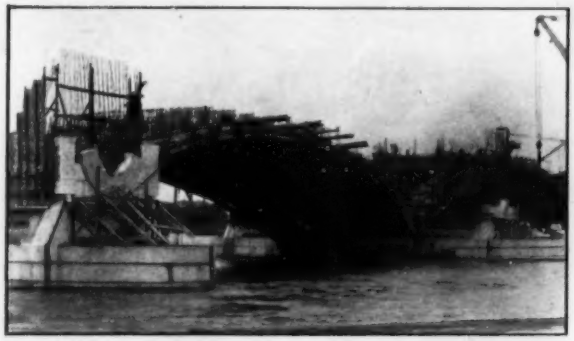
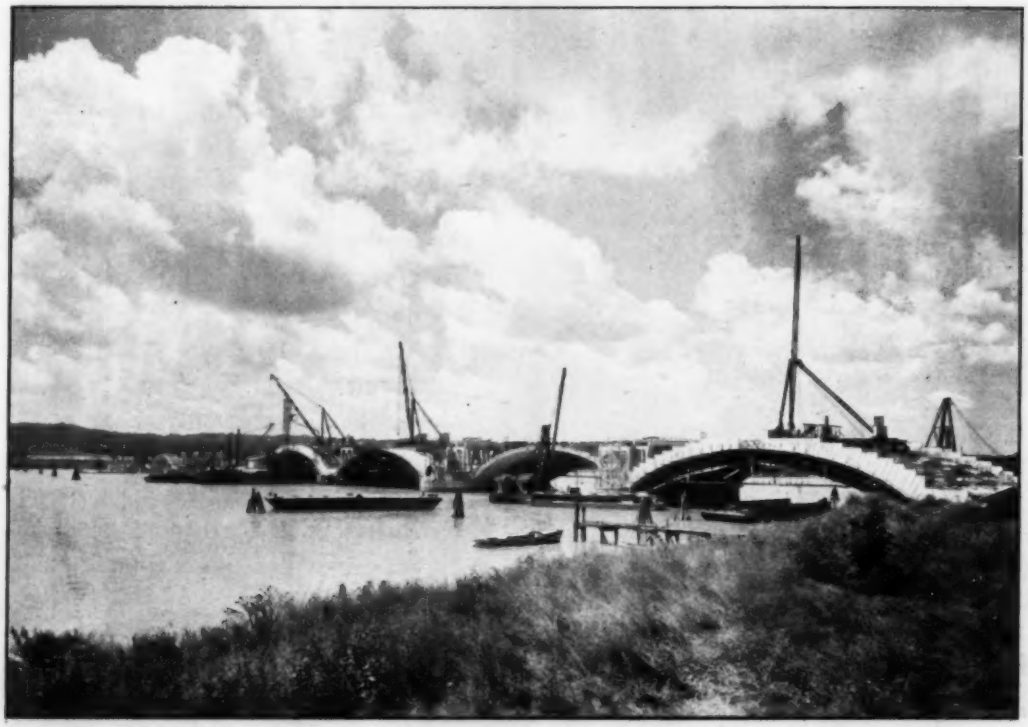


Three views of the Arlington Memorial Bridge at Washington, D. C. being built by the Federal Government at a cost of $15,000,000. McKim, Meade and White, architects. Entire facing of masonry arches, parapet, and the architectural features of the bridge's plaza and approaches will be of granite. Views from top of page to bottom, show detail of granite piers, general view of bridge and storage of granite at the site.



Because of the extraordinary care with which this work is being done it is estimated that four and one-half years will be required to complete the main bridge. The specifications state that the class of work usually found in bridges will not be acceptable "and require that all granite be set within five one thousandths of a foot of true line and grade."

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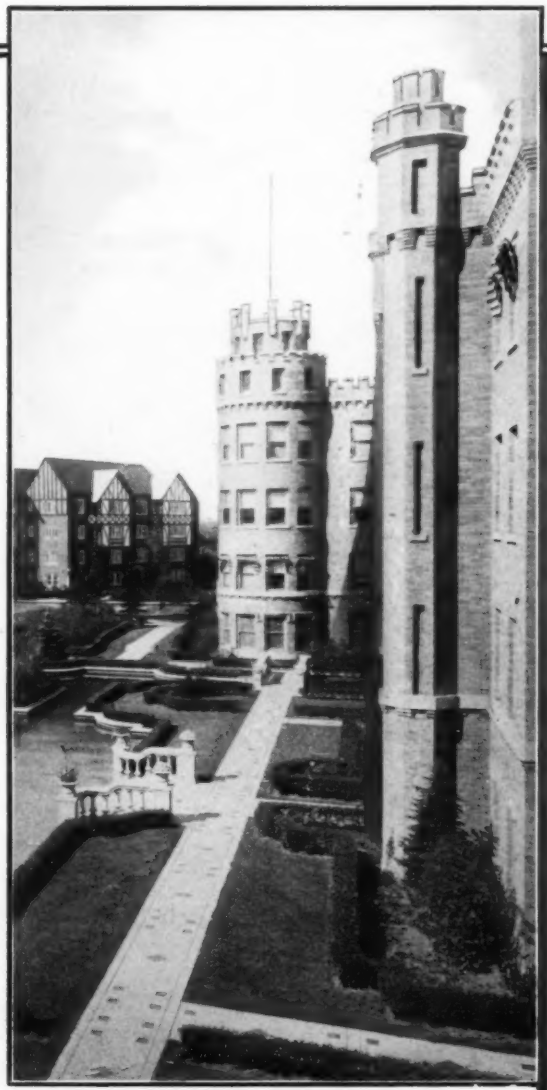
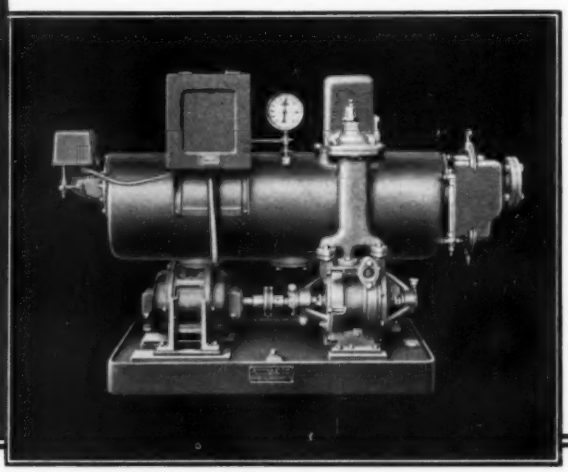


Park Gables, one of seven buildings comprising the Indian Boundary Park Co-operative Apartment Development, Chicago, Ill. Gubbins, McDonnell & Blietz, realtors. Mr. James F. Denson, Architect.

NEAR the northern city limits of Chicago, surrounding three sides of a fifteen acre park that once divided the lands of the United States from those of the Chippewa, Ottawa, and Pottawatomie tribes, is the Indian Boundary Park Co-operative Apartment Development.

When completed, this project will comprise seven large apartment buildings, containing 327 co-operative homes in one of Chicago's exclusive residential neighborhoods.

A Jennings Vacuum Heating Pump is installed on the heating systems. By helping the radiation respond quickly to varying heating demands, this pump contributes to the comfort of the owner occupants. By enabling the heating systems to serve with substantial savings in boiler fuel, it also is co-operating with the owners in keeping operation within the estimated budget.



Motor-driven Jennings Vacuum Heating Pump is installed on the return line of the vacuum steam heating system in Park Gables.

Jennings Pumps

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Left—The West Jersey Homeopathic Hospital at Camden, New Jersey. Here 800 gallons of Barreled Sunlight have been used for interior painting—in pure white and buff tint.

Below—The Cooper Hospital, at Camden, New Jersey—a satisfied user of Barreled Sunlight for the past several years.

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THE two Camden, New Jersey, hospitals shown above are painted for lasting, cheerful cleanliness and good looks. Both of them use Barreled Sunlight as best fulfilling their exacting requirements.

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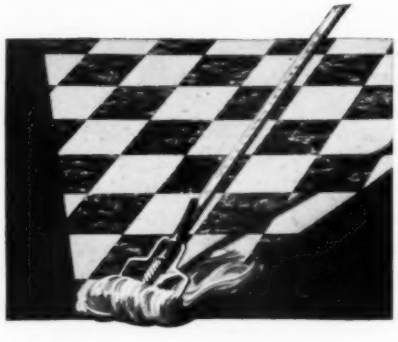

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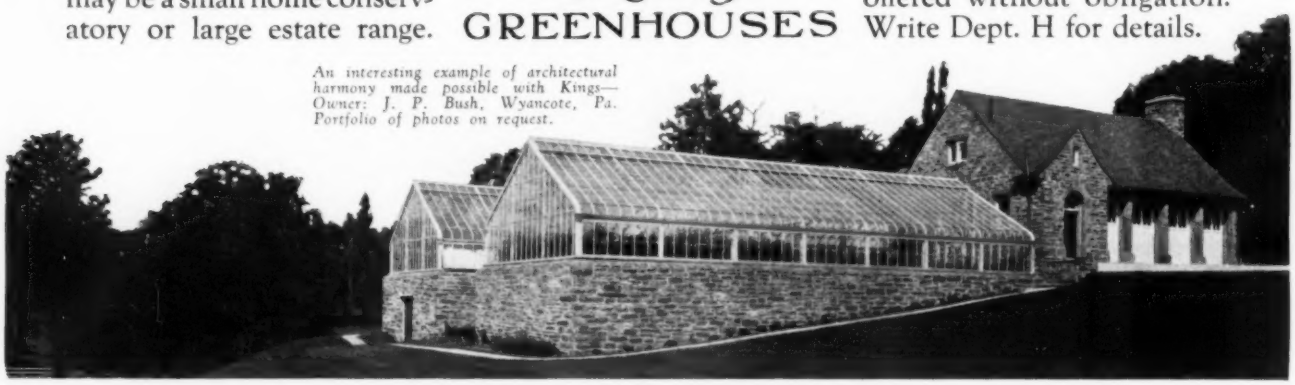

An interesting example of architectural harmony made possible with Kings—Owner: J. P. Bush, Wyncote, Pa. Portfolio of photos on request.

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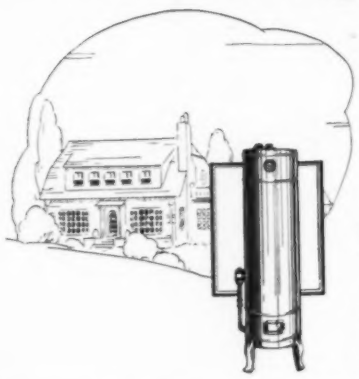

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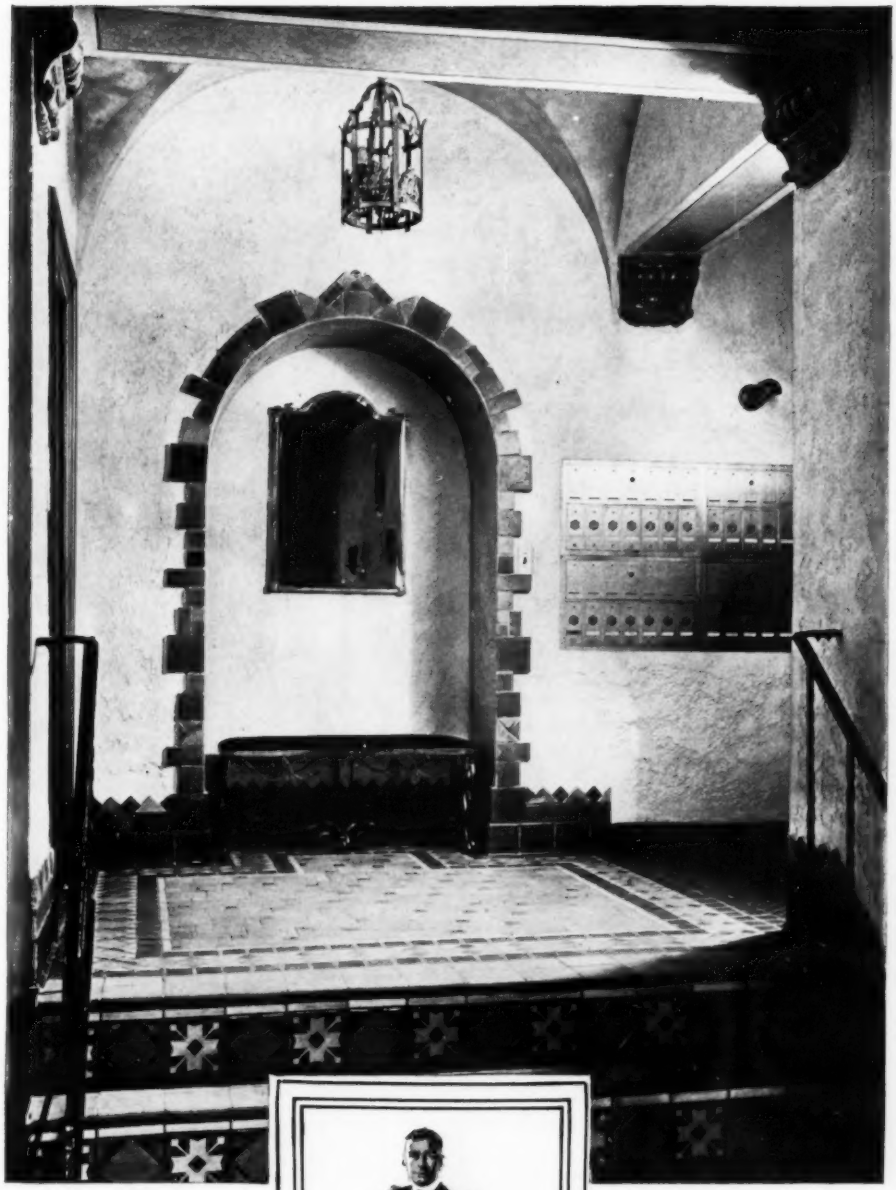

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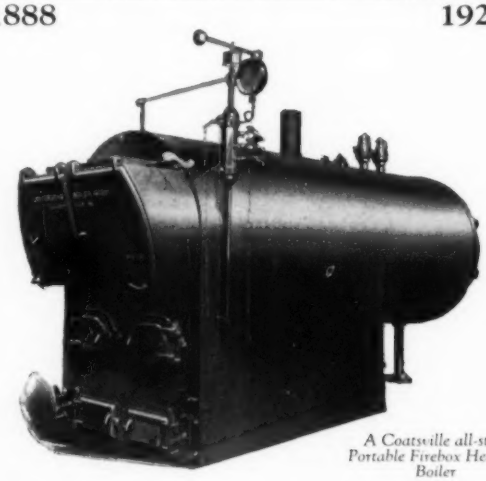

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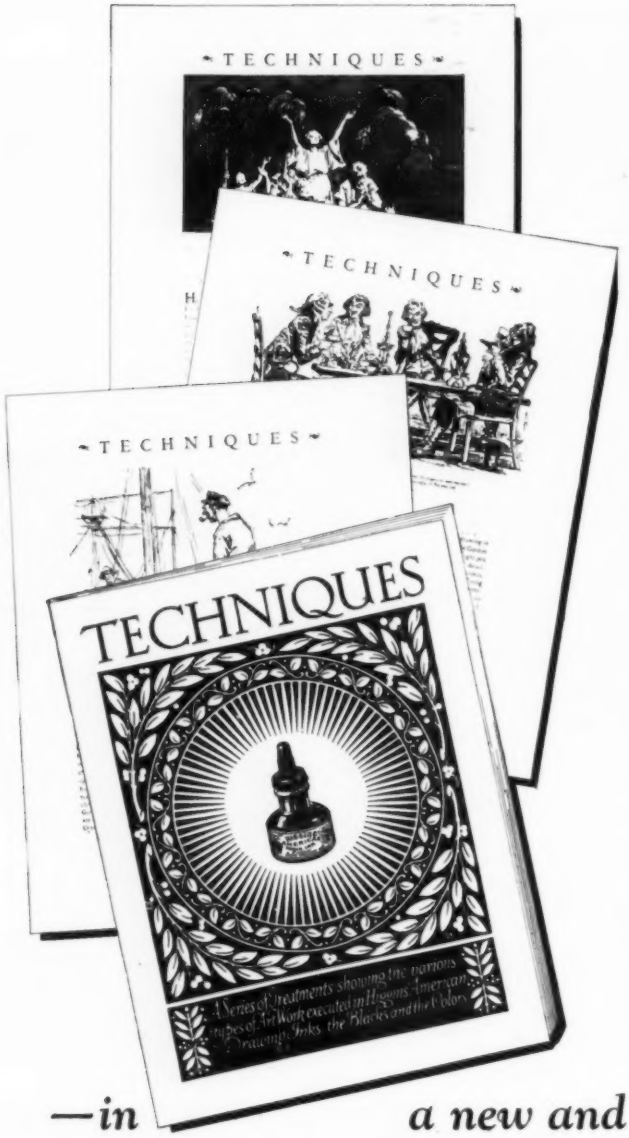
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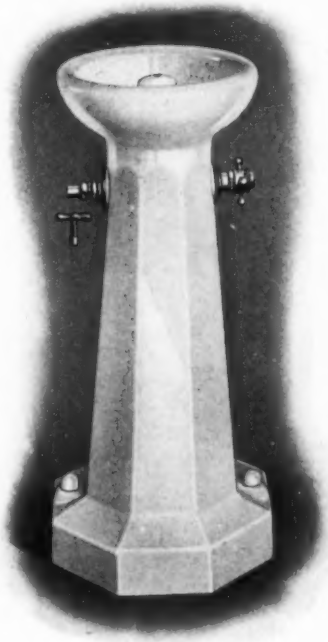

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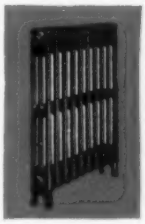
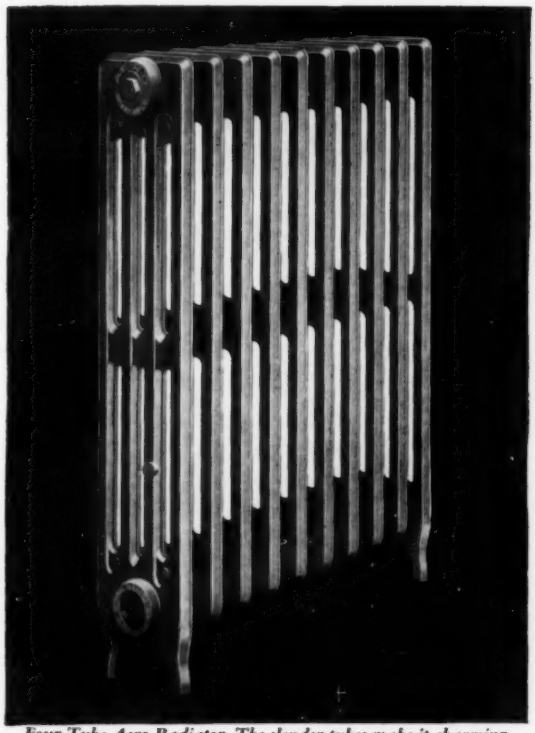
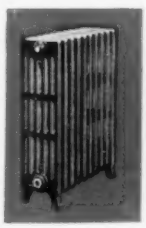


Three Tube Aero Radiator. Graceful, and pleasing, it is particularly adapted to narrow corridors, and rooms where space is at a premium.

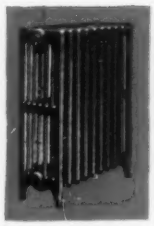
Five Tube Aero Radiator. This model finds its field of use in all general applications: Homes, schools, apartments, offices and everywhere.



Four Tube Aero Radiator. The slender tubes make it charming and efficient; provide the scientifically correct ratio of air space to heating area.



Six Tube Aero Radiator. Provides an unusual amount of radiating surface, but being only nine inches wide takes up very little space.



Seven Tube Aero Radiator. A unit with tremendous warming capacity which is used where space limitations will not permit a long radiator.

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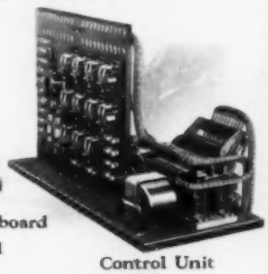
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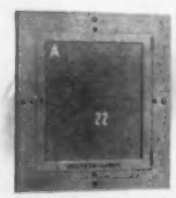
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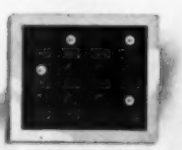
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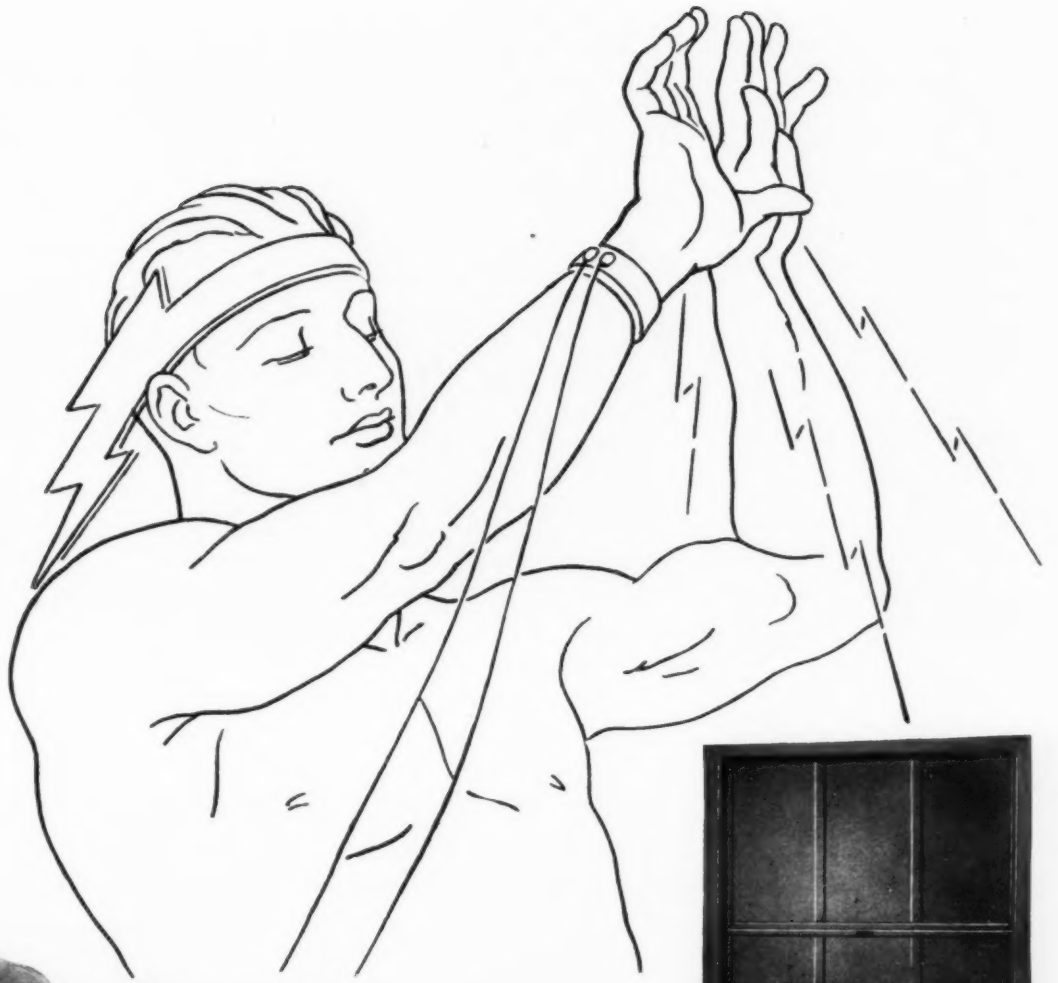

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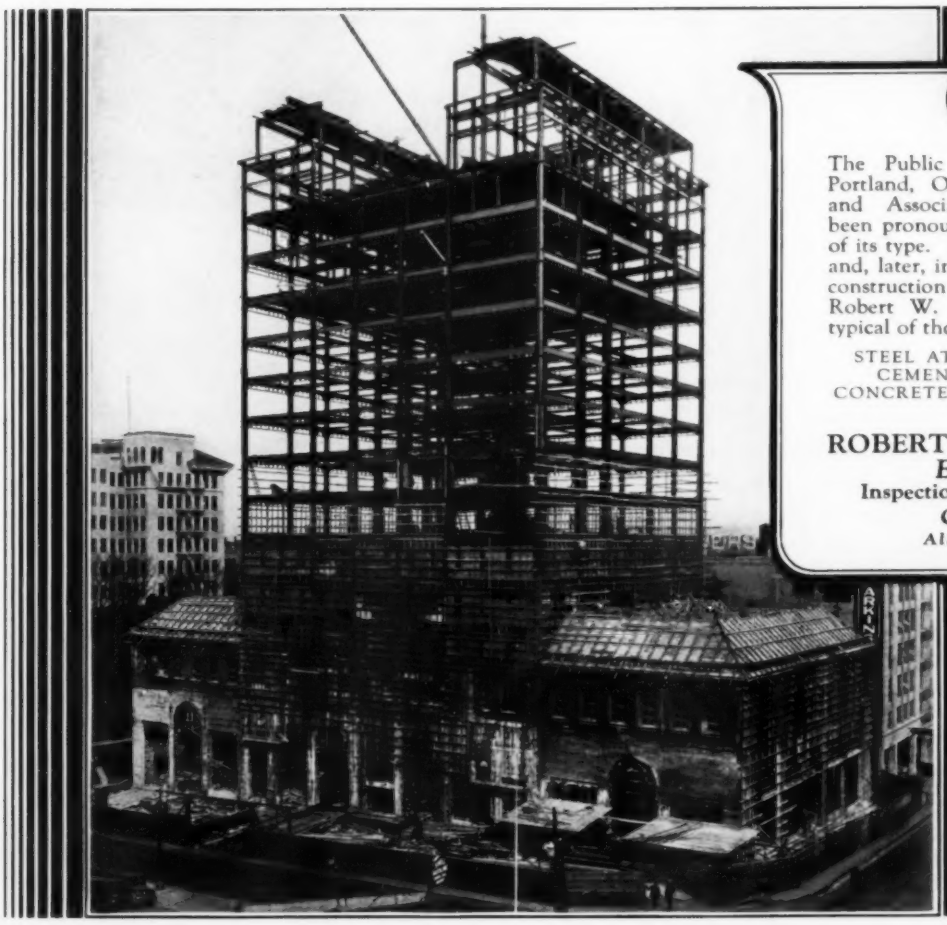

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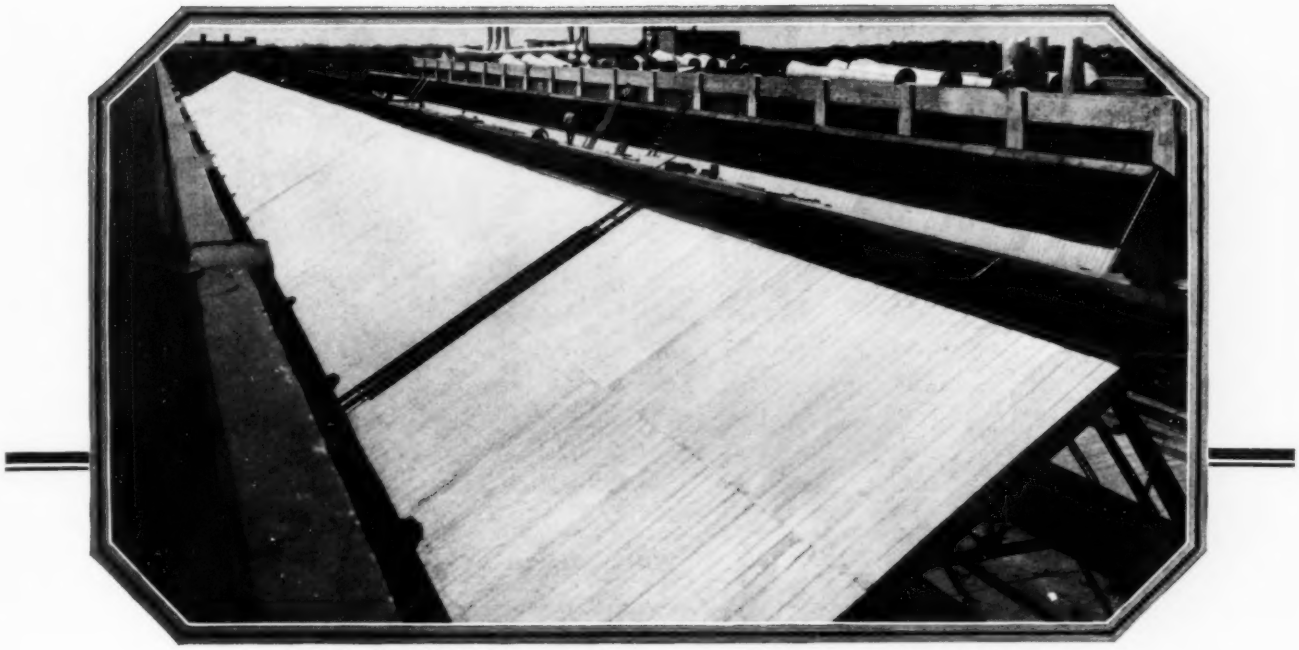

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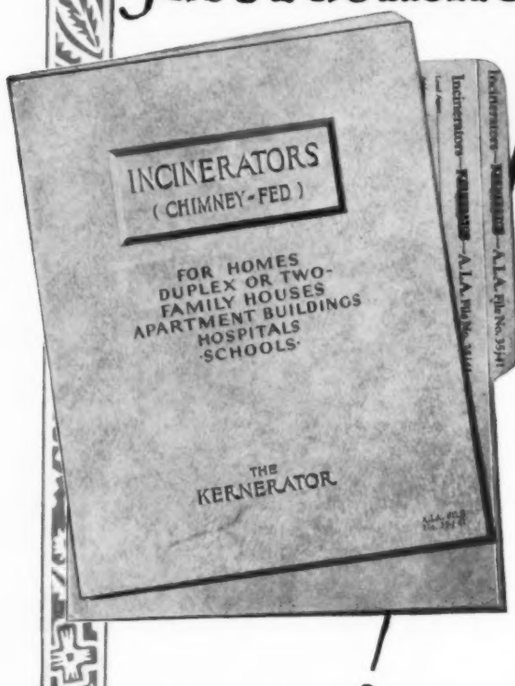

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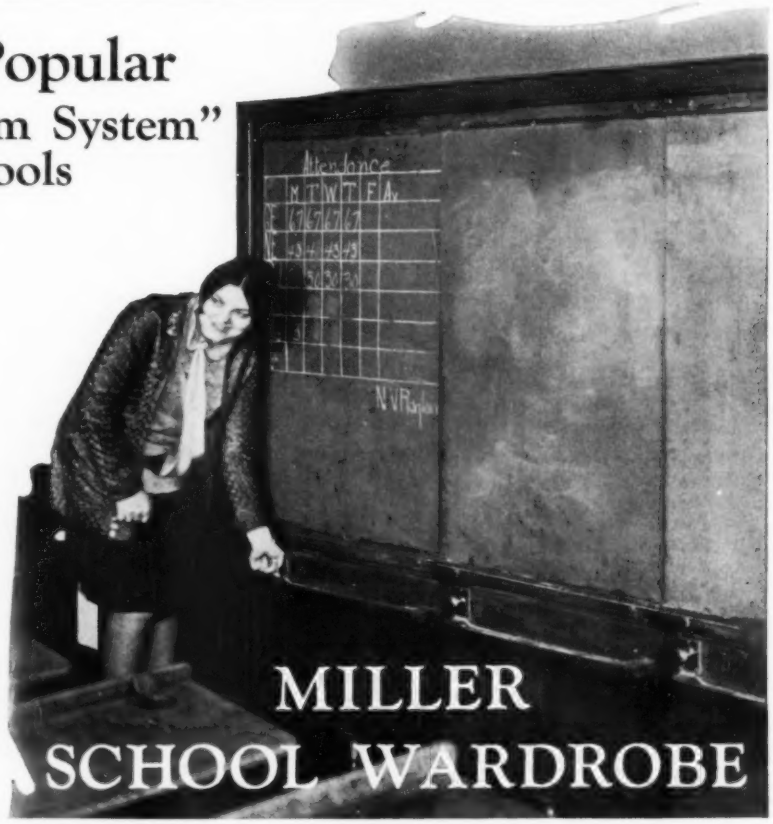

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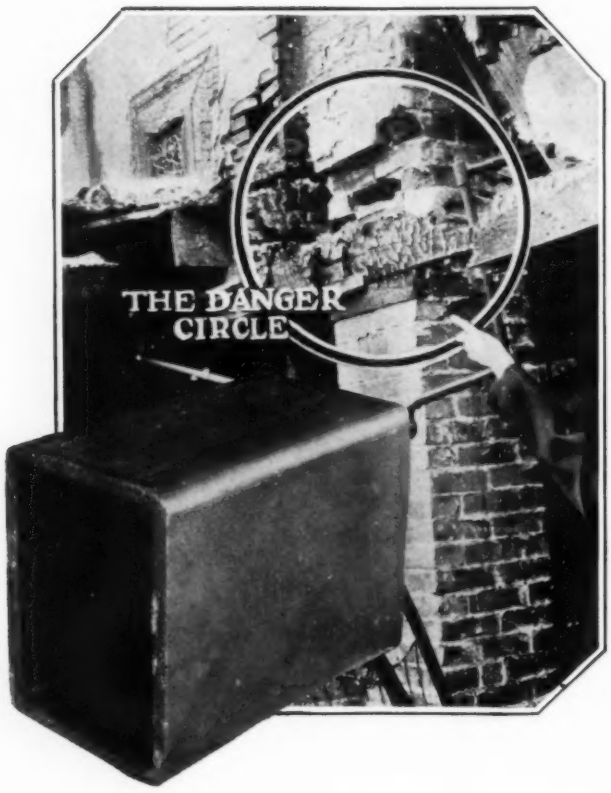

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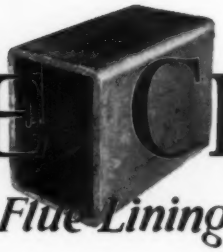

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AR 12—Gray

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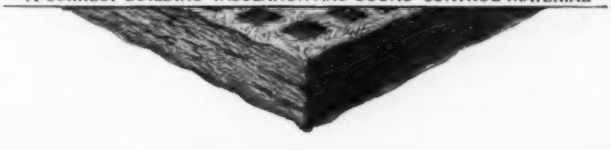

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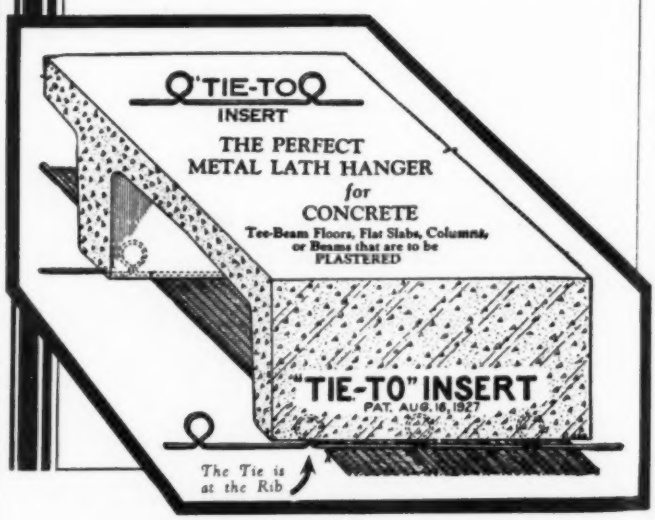

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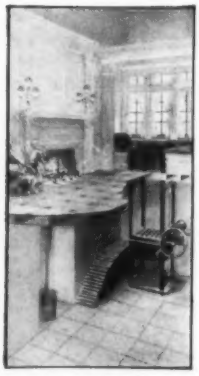

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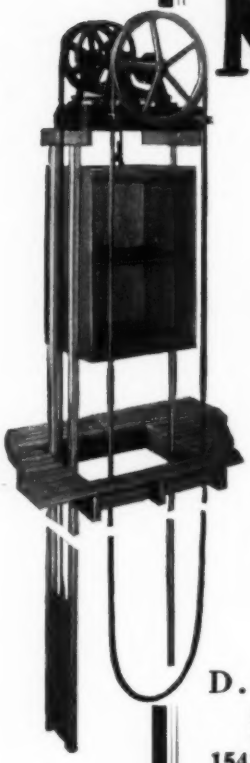

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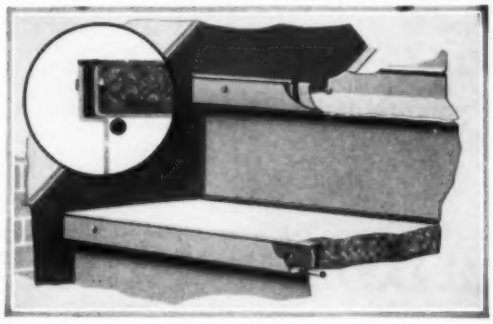

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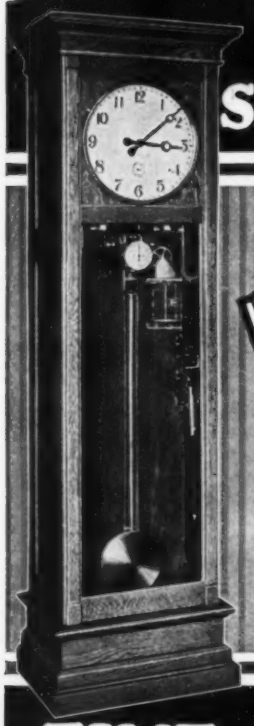

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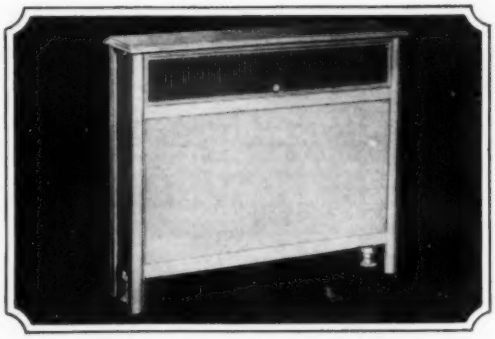

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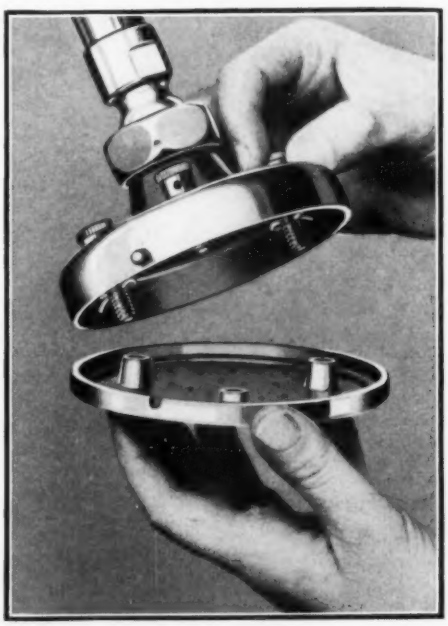

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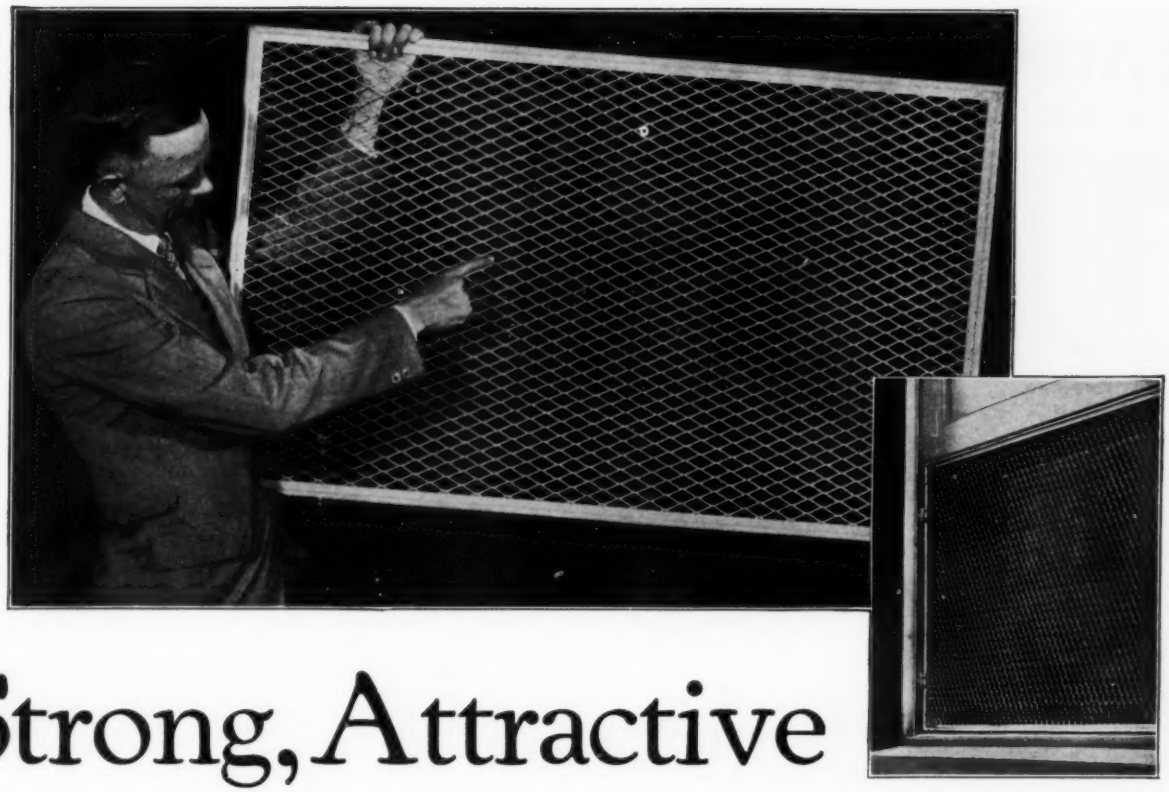

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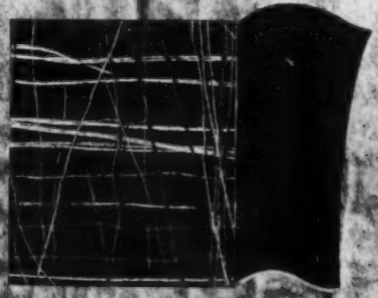

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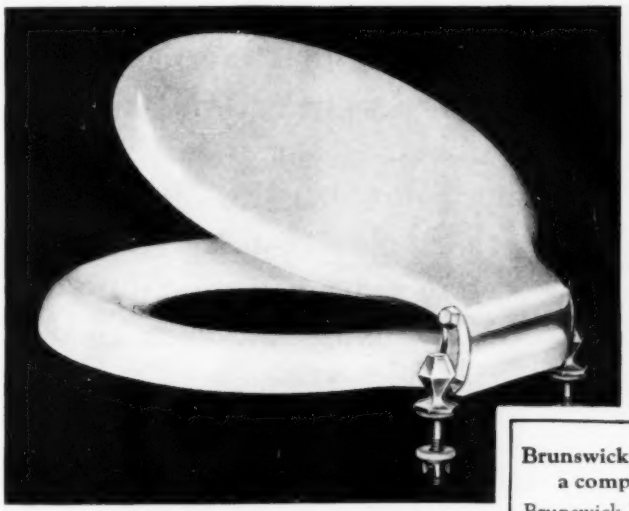

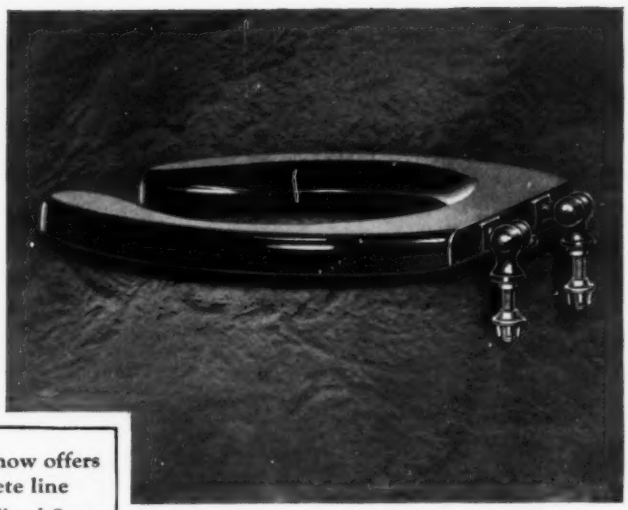

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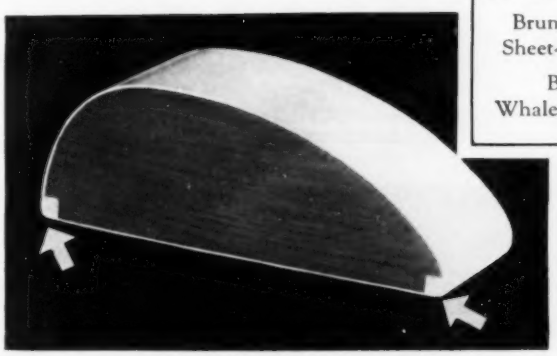

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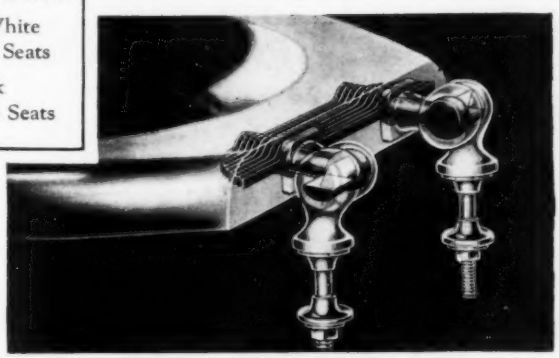

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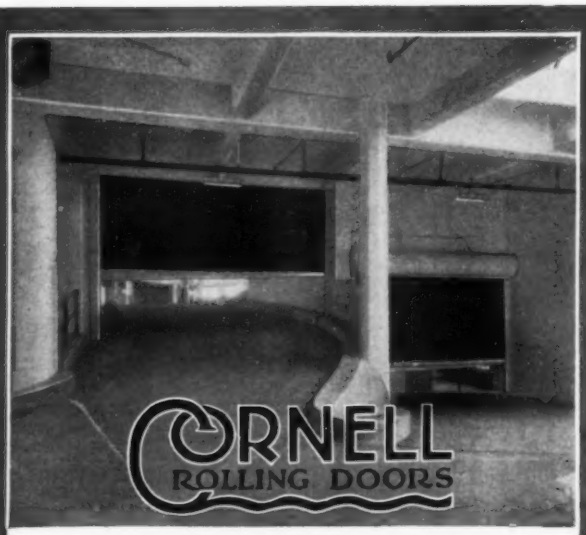

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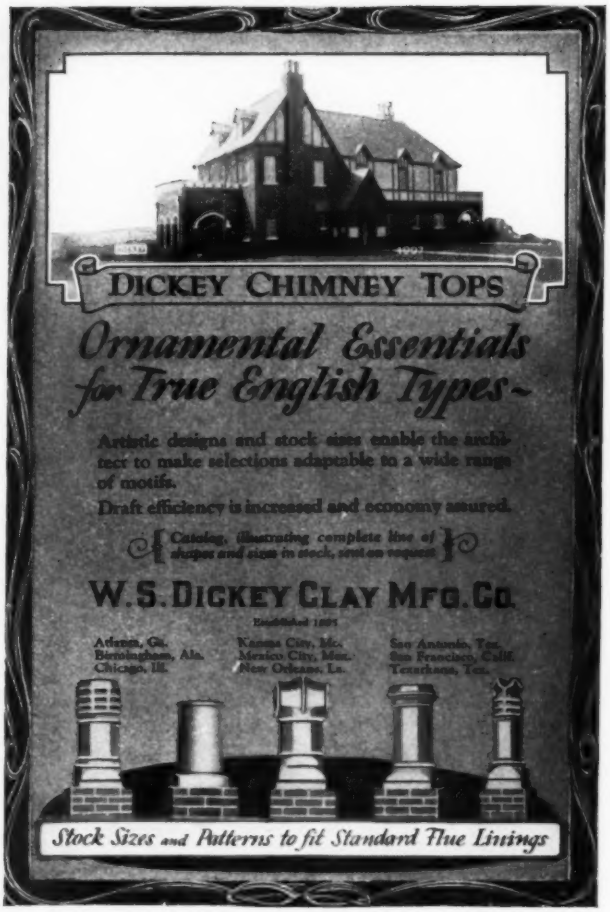
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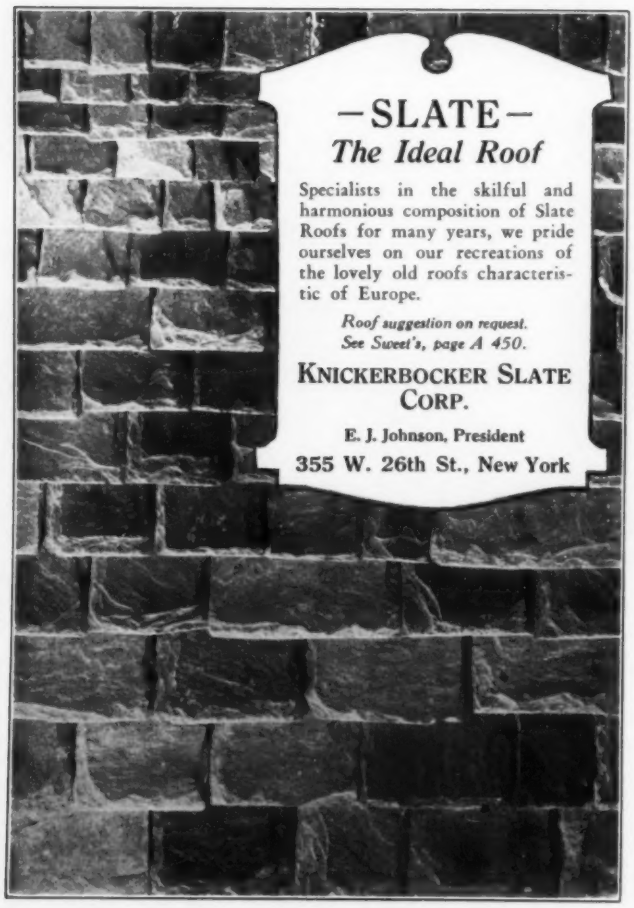
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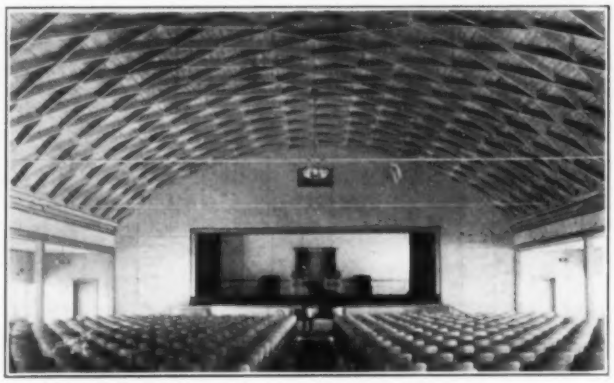

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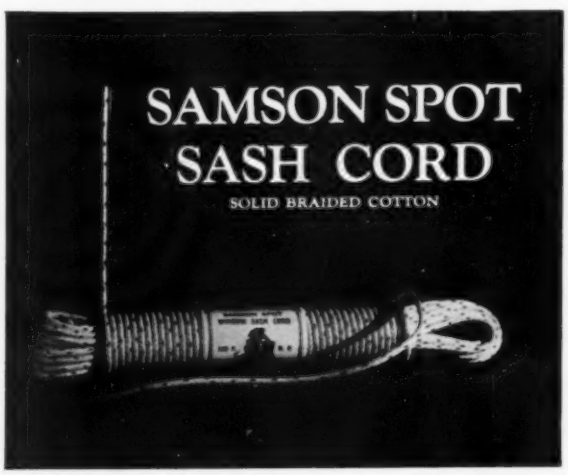

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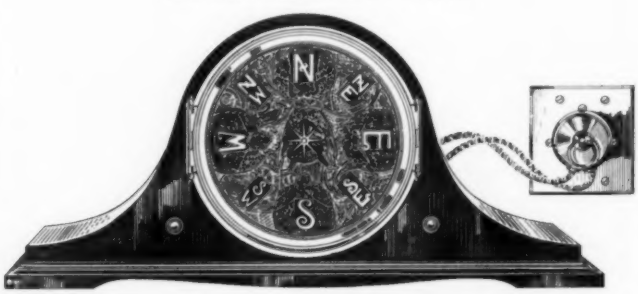

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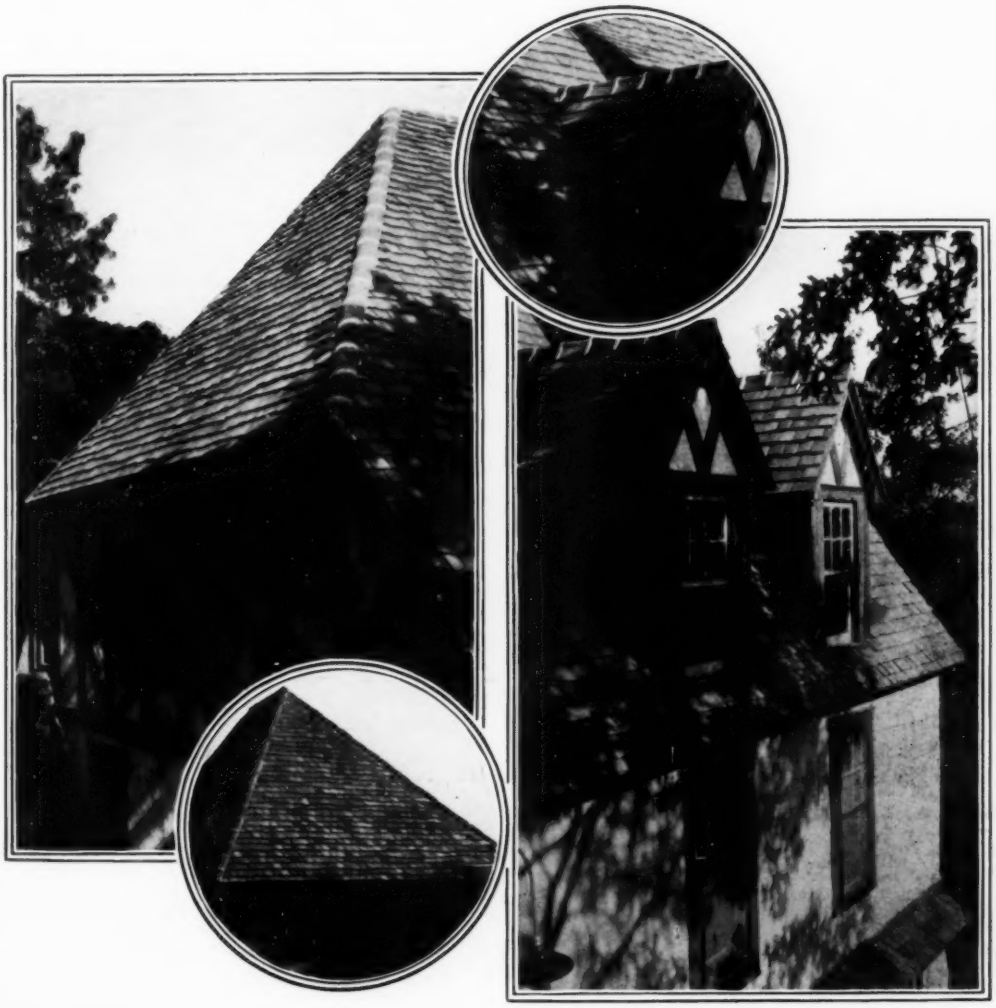

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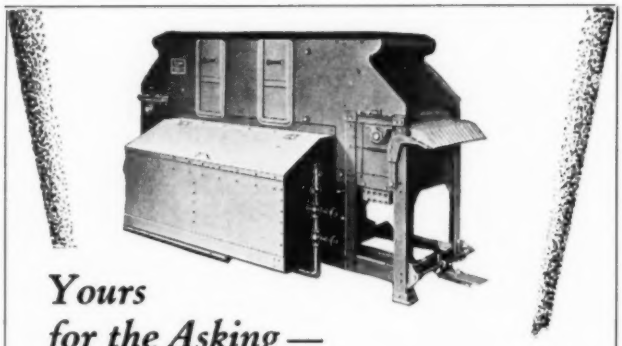

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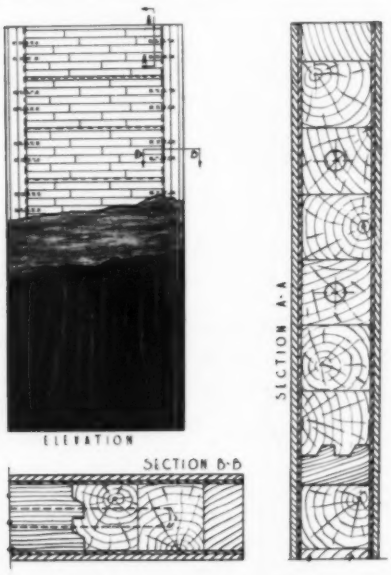

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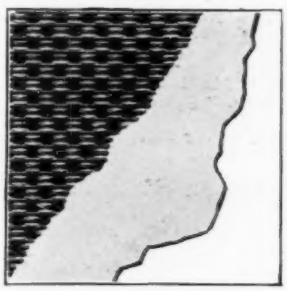

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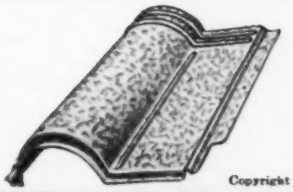

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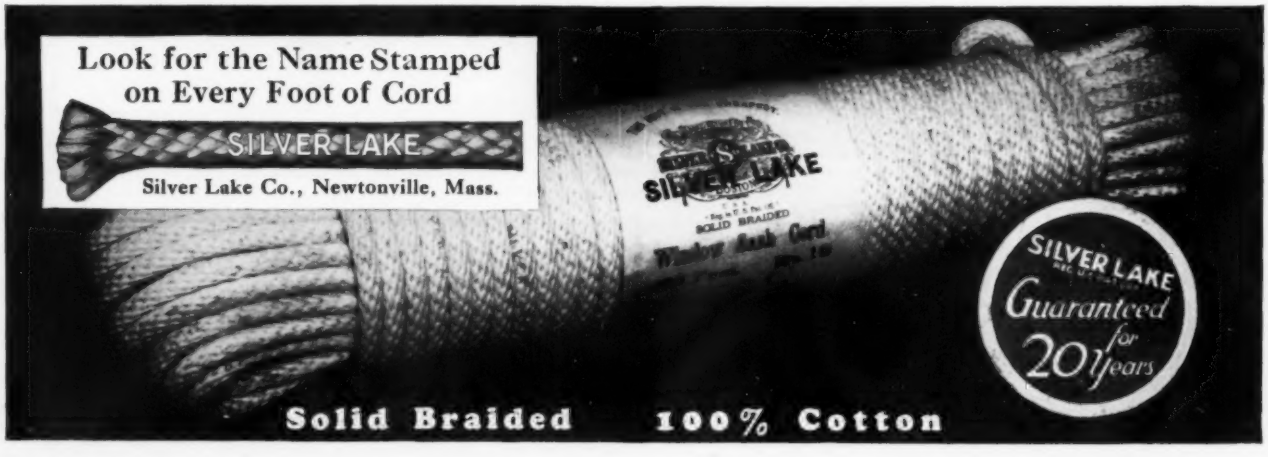

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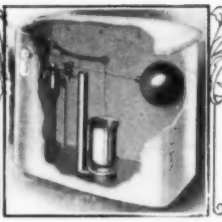

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(Above at right) Boulevard View Apartments, 2374 Euclid Heights Boulevard, Cleveland, Ohio. Architect, Max Weiss, Cleveland; Builder and Owner, I. Koslen, Cleveland.

(At right) Representative Kitchen in Boulevard View Apartments showing New Process Red Wheel Gas Range as installed.

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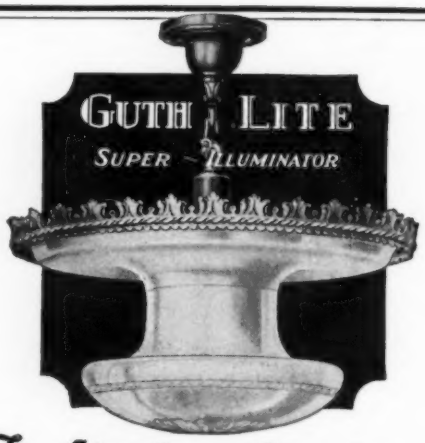

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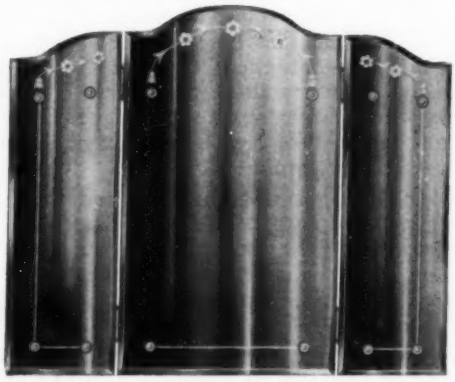

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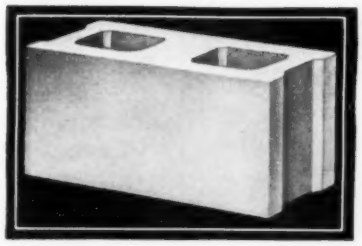
UNITED STATES  GYPSUM COMPANY

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GOTHEIN, MARIE LUISE

A History of Garden Art. Edited by Walter P. Wright. Translated from the German by Mrs. Archer-Hind, M.A. Preface by Walter P. Wright. New York: E. P. Dutton & Co. 1928. 1st English edition. Vol. 1: xxiv. 459 pp. Vol. 2: xv. 486 pp. 600 Ill. 8⅛ x 10⅞ in. Cloth. $25.00. 2 vols.

EBERLEIN, HAROLD DONALDSON

Manor Houses and Historic Homes of Long Island and Staten Island. Philadelphia: J. B. Lippincott Co. 1928. 1st ed. xi. 318 pp. Ill. 6⅝ x 9¾ in. Cloth. $12.50.

TAYLOR, FREDERICK W., SANFORD E. THOMPSON, S.B., AND EDWARD SMULSKI, C.E.

Concrete Plain and Reinforced. New York: John Wiley & Sons, Inc. 1928. 4th ed. Vol. 11. xiii. 688 pp. 6¼ x 9¼ in. Cloth. $7.50.

SONN, ALBERT H.

Early American Wrought Iron. New York: Charles Scribner's Sons. 1928. 1st ed. 3 Vols. Vol. 1, xvi. 262 pp. Vol. 2, 204 pp. Vol. 3, 263 pp. Ill. 9⅞ x 12⅞ in. Cloth. $35.00 per set.

HOLLOWAY, EDWARD STRATTON

American Furniture and Decoration. New York: J. B. Lippincott Company. 1928. 1st ed. 191 pp. Ill. 6¼ x 8⅞ in. Cloth. $5.00.

SIMONDS, GIFFORD K. AND JOHN G. THOMPSON

The American Way to Prosperity. Chicago: A. W. Shaw Company. 1928. 1st ed. xiii. 243 pp. Ill. 6¼ x 9¼ in. Cloth. $5.00.

Annual Report of the Smithsonian Institution, 1927. Washington: United States Government Printing Office. 1928. 1st ed. xii. 580 pp. Ill. 6⅛ x 9⅜ in. Cloth. $1.75.

SMALL, TUNSTALL, AND CHRISTOPHER WOODBRIDGE

Houses of the Wren and Early Georgian Periods. New York: Wm. Helburn, Inc. 1928. 1st ed. viii. 139 pp. Ill. 10¼ x 13 in. Cloth. $10.00.

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A.I.A. File No. 20b1. "Metal Lath and Allied Building Materials." Advantages and uses. Weights. Different types of metal lath. Accessories including corner bead, base ground, picture mold, stucco binder, wall plug and ties, zig-zag wall ties, crescent wall ties, galvanized corner shields, coal doors, ash pit and clean-out doors, mortar and brick hods, etc. Specifications. Wheeling Corrugating Co., Wheeling, W. Va. 8½ x 11 in. 18 pp. Ill.

(Continued on page 132)

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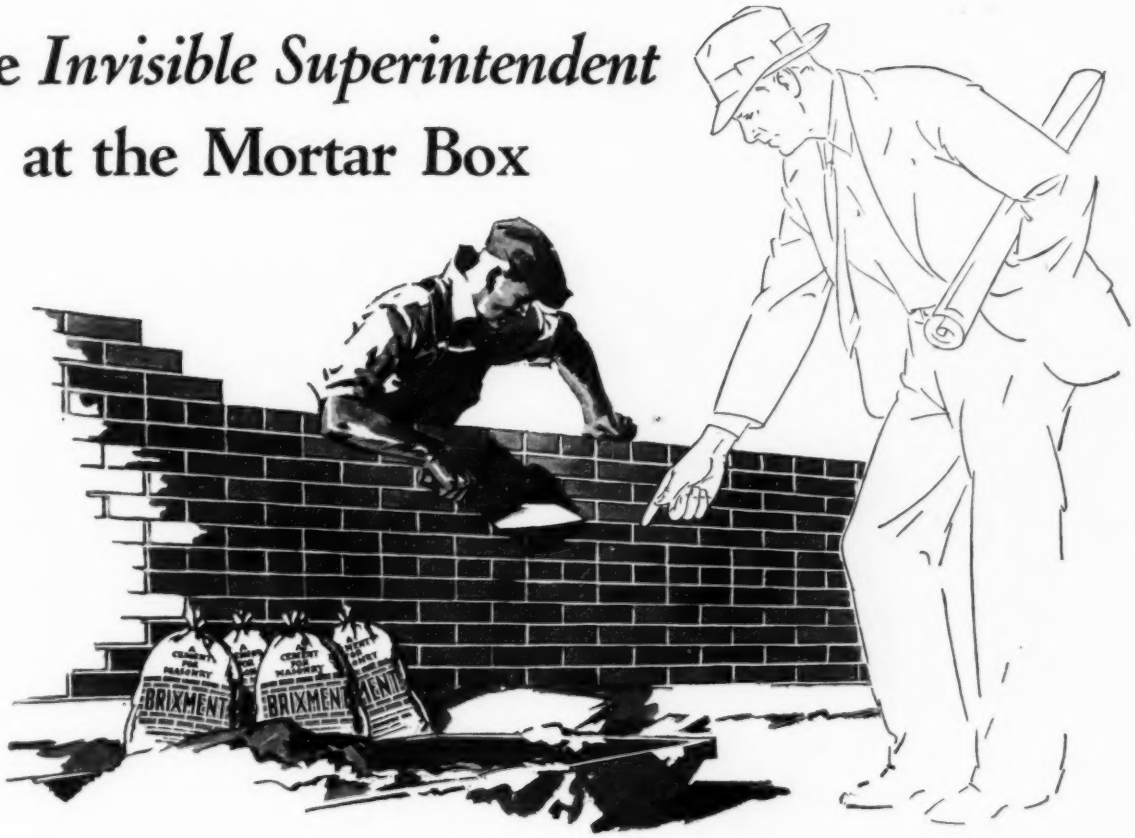

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BUILDING UNITS, CINDER CONCRETE

Cinder block and cinder tile for walls. Outstanding features. General use. Advantages, including light weight, strength, resistance to fire, etc. Economy of construction. Typical installations. Specifications. Detailed drawings. National Building Units Corporation, 1600 Arch Street, Philadelphia, Pa. 8½ x 11 in. 36 pp. Ill.

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"Furnishings for Modern Churches." A. I. A. File No. 35-A-42. 52 plates. Actual examples of altars, prayer benches, chancel rails, reredos, chancels, pulpits, etc. Carved paneling. Details. Statues. American Seating Company, 14 East Jackson Blvd., Chicago, Ill. 9½ x 11½ in.

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"Arco Specifications." A. I. A. No. 25C. General working conditions. Varnishes for interior trim, floors, and exteriors. Enamels for wood surfaces, plaster walls, exterior woodwork, cement, concrete and brick. Wall finishes. Mill Whites for metal surfaces, woodwork, concrete, wall board, etc. Concrete paints for stucco, brick, cement surfaces, etc. Metal coatings. Color charts. Particulars regarding application and preparation. Typical installations. The Arco Company, Cleveland, Ohio. 8½ x 11 in. 46 pp. Ill.

(Continued on page 134)

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LIGHTING, THEATRE

A. I. A. 31C2. Bulletin No. 42. "The Control of Lighting in Theatres." Remote control. Advantages. The FA major system. Types of control. Stage pilot switchboard. Internal wiring. Dimmer connections. Branch circuits. Magazine fuse panel. Modern stage lighting equipment. Cross connecting plugging-panel. Typical installations. Suggested electrical specifications. Detailed drawings. Frank Adam Electric Co., St. Louis, Mo. 8¼ x 11½ in. 66 pp. Ill.

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(Continued on page 136)

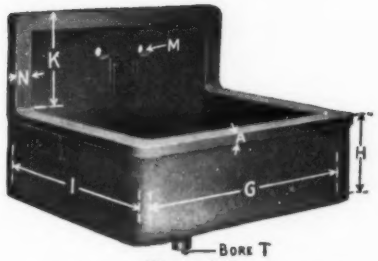

Figure 237
ACID PROOF LABORATORY SINK WITH BACK

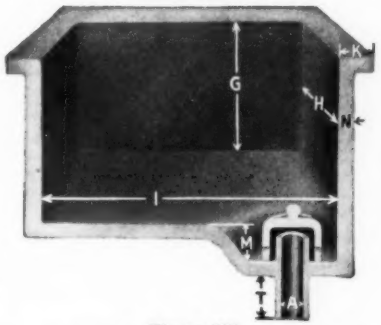

Figure 235
ACID PROOF LABORATORY SINK WITHOUT BACK, SHOWING LUTE TRAP

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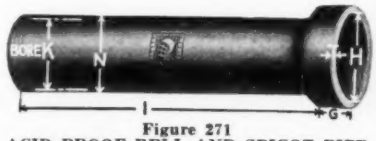

Figure 271
ACID PROOF BELL AND SPIGOT PIPE

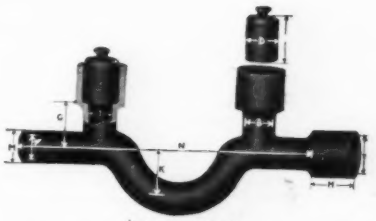

Figure 267-A
ACID PROOF RUNNING TRAP WITH CLEANOUTS AND PLUGS

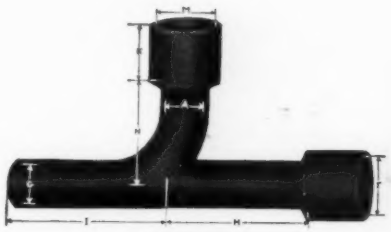

Figure 273-A
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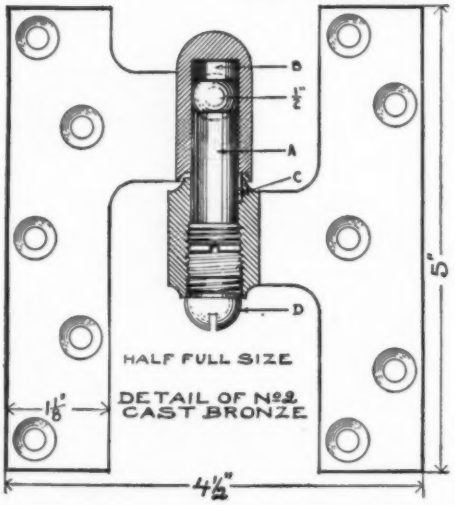
Rixson
Adjustable Ball Hinge



In many architects' offices the remarkable characteristics of this hinge can still be a discovery. We are familiar with the enthusiasm with which it is received by each new concern.

Its technical values are no mystery. Pivot (A), Cup Bearing (B), and the half-inch steel ball are all of hardened steel, capable of bearing unusual weights with minimum friction. The special bronze used, permits specification of only one pair to the door on heavy doors, such as hollow metal corridor doors.

In addition to neatness, strength, and smooth action this Rixson Ball Hinge is *adjustable without demounting doors.* A screw driver is the only necessary tool. Simply remove Cap (D) and Locking Screw (C) Pivot and door can then be raised or lowered.

Refer to Sweet's (23d Edition) for specification details for your next job.

The Oscar C. Rixson Company, 4450 Carroll Ave., Chicago
New York Office: 101 Park Ave., N. Y. C.

RIXSON
Builders' Hardware

Overhead Door Checks	Friction Hinges	Concealed Transom
Floor Checks, Single and Double Acting	Adjustable Ball Hinges	Operators
Olive Knuckle Hinges	Casement Operators	Butts, Pivots and Bolts
	Casement Hinges	Door Stays and Holders

RECENT TRADE PUBLICATIONS—(Continued)

Lighting Fixtures

"A Few of Our Installations." Theatres, residences, hotels, clubs, banks and public buildings, churches. Actual work done. Victor S. Pearlman & Co., 533-535 South Wabash Avenue, Chicago, Ill. 8¾ x 11⅛ in. 8 pp. folder. Ill.

Fence, Steel

General catalogue No. 100. Cyclone copper-bearing steel fence for industrial property, municipal property, estates and homes. Wire partitions, window guards, folding gates, etc. Wrought iron fence for schools, playgrounds, parks, institutions, cemeteries, etc. Specifications, construction details and general information. Cyclone Fence Company, Waukegan, Ill. 8½ x 11 in. 64 pp. Ill.

Partitions, Portable

A. I. A. File No. 19e62. "Takapart" patented portable partition for offices. Daylight and ventilation. Enlarging of office space. Finishes. Chart key to better business homes. Office floor plans. Accessories. Detailed drawing of Takapart partition and railing. Specifications. Takapart Division, Hyde-Murphy Co., Ridgway, Pa. 8½ x 11 in. 32 pp. Ill.

Radiators

"Within the Walls." The Robras 20-20 "out of sight" radiator. Advantages. Installation. Information and typical installations. Detailed drawings. Rome Brass Radiator Corporation, 1 East 42nd St., New York. 4 x 9 in. 16 pp.

Wall Finish

Complete information on what Tx-Crete is and does. Full information and illustrations of various types of wall finish. Tints and colors. Application. Information on how to glaze a surface. Coverage. A. C. Horn Co., Horn Building, Long Island City, N. Y. 8½ x 11 in. 24 pp. Ill.

Lumber and Its Utilization

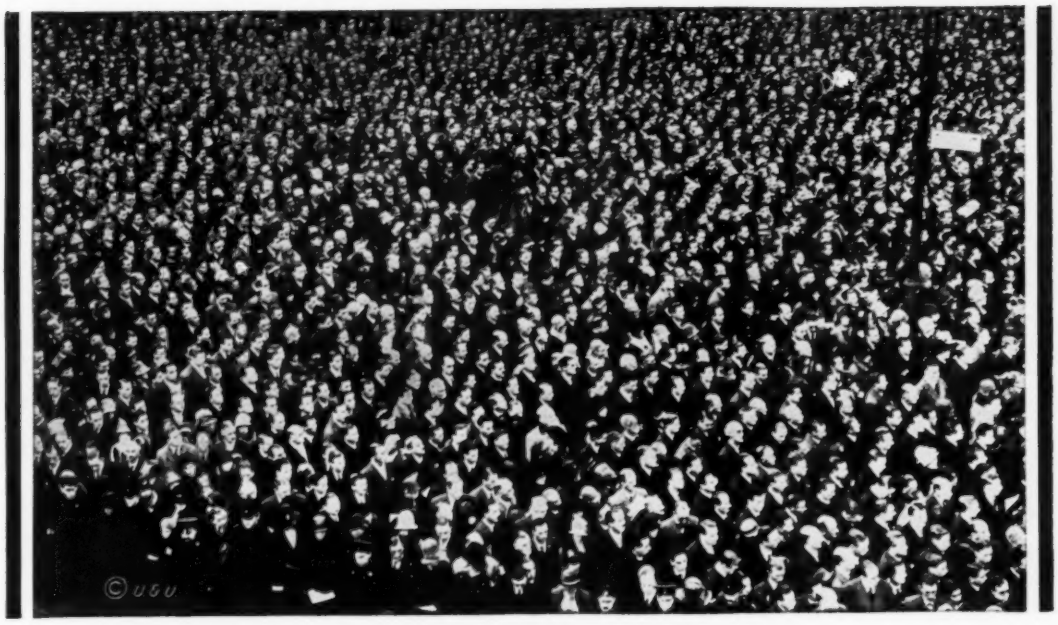
A.I.A. File No. 37. "The Cost of Comfort." Economics of dwelling insulation, walls, roofs and floors. Approximate fuel savings in dwelling houses. Influence of infiltration on comfort. Example of application of cost of comfort data. Detailed costs. Plates and how to use them. National Lumber Manufacturers Association, Washington, D. C. 8⅜ x 10⅞ in. 80 pp. Ill.

Buildings, Steel

"Blaw-Knox Standard Buildings." Advantages, including firesafe, weatherproof, flexible, economical, insured. Erection. Copper bearing galvanized steel cover. Use with walls of brick, tile, etc. Standard types. Sash and doors. Heating and ventilation. Blawsteel roof sheathing. Flat roof buildings. Industries using Blaw-Knox. Blaw-Knox Company, Pittsburgh, Pa. 8½ x 11 in. 36 pp. Ill.

Tube Couplings

"Parker Tube Couplings." Standard Shapes. Specifications and instructions for the installation of Parker tube couplings and copper tube in buildings, power plants and similar structures. The Parker Appliance Company, 10320 Berea Road, Cleveland, Ohio. 9 x 11¾ in. Series of illustrated folders. Ill.



If

you were designing homes for all the people in this picture, you could give every one of them maximum satisfaction by specifying Arco Packless Valves No. 999. Think what this new valve offers:

Arco Packless Valves never need repacking, and are therefore, in the long run, less expensive than old style packed valves that must be repacked periodically—

With them there is no danger of leaks which cause costly damage to floors and rugs, for Arco Packless Valves are guaranteed not to leak—

With the 999 there is no need to turn and turn and struggle with handles that stick and bind, for Arco Packless Valves open with one smooth turn of a handle that is never hot.

When clients know the facts, they will always select Arco Packless Valves in preference to the cheapest packed valves made.

Arco Packless Valve No. 999—Made in angle, corner and globe patterns, round or lever handle—for steam, water, vapor or vacuum installations.

AMERICAN RADIATOR COMPANY

40 WEST 40th STREET ACCESSORIES DIVISION PV-1012 NEW YORK, N. Y.

Architect John Menge, Jr., on this home of W. F. Maertz, Milwaukee, Wis., has used WEATHERBEST Stained Shingle Thatched Roof in Variegated Straw colors

IN a few localities where there is perhaps a special value in using local material on sidewalls rather than WEATHERBEST Stained Shingles—remarkable results can be secured in using WEATHERBEST Stained Shingle Roofs in special treatments.

There are many possibilities in the use of full thatch or semi-thatch effects explained in a special book showing various examples of such work ranging from small cottage type to country estates.

Weatherbest STAINED SHINGLES FOR ROOFS AND SIDE-WALLS

Let us send this book together with color chart and portfolio of full color-photogravures showing WEATHERBEST Stained Shingles in regular 16-in., 18-in. and 24-in. lengths, and in many special shapes such as WEATHERBEST Shakes and in thatch effects. WEATHERBEST STAINED SHINGLE CO., Inc., 2312 Main St., North Tonawanda, N. Y. Western Plant: St. Paul, Minn. Distributing Warehouses in Leading Centers.

CLASSIFIED DIRECTORY OF ADVERTISERS

Alphabetical Index to Advertisers, Page 156

After reviewing advertisements in this issue—consult Sweet's Architectural Catalogue 22nd edition for catalogue and specification information on the products of most of these manufacturers.

Acid Proof Chemical Stoneware
Knight, Maurice

Arc Welding
Lincoln Electric Co.

Arch Roofs
Lamella Roof Syndicate, Inc.

Architectural Faience
Associated Tile Mfrs.

Architectural Supplies
American Lead Pencil Company
Higgins, Chas. M., & Co.

Artstone
Rackle, George, & Sons Co.

Asbestos
Johns-Manville Corporation

Bag Trucks
Bates Valve Bag Corp.

Basement, Windows—Steel
Detroit Steel Products Co.
Kalman Steel Company
Truscon Steel Company

Bathroom Accessories
Eustis, J. P., Mfg. Company
Hess Warming & Ventilating Co.
Morton Manufacturing Co.

Beads—Corner Metal
Kalman Steel Company
Genfire Steel Company
Truscon Steel Company
Wheeling Corrugating Co.

Beams, Angles, Channels, Etc.
Carnegie Steel Company

Beds—Concealed
Concealed Bed Corp.

Binding Strips
Blasteel Mfg. Co.

Blackboards
Weber Costello Co.

Boiler and Pipe Covering
Johns-Manville Corporation
Ric-wiL Company

Boilers
American Gas Products Co.
American Radiator Co.
Dahlquist Mfg. Co.
Smith, H. B., Company, The, Inc.

Bolts—Door
Corbin, P. & F.

Brass and Bronze Workers
See "Ornamental Metal Workers"

Brick
Fiske & Company, Inc.
Hood, B. Mifflin, Brick Co.

Builders
Stone & Webster, Inc.

Building Paper
Bird & Son, Inc.
Sisalkraft Company

Buildings—Steel
American Bridge Co.
Carnegie Steel Company

Butts
Corbin, P. & F.
Stanley Works

Cabinet Work
Hyde-Murphy Co.

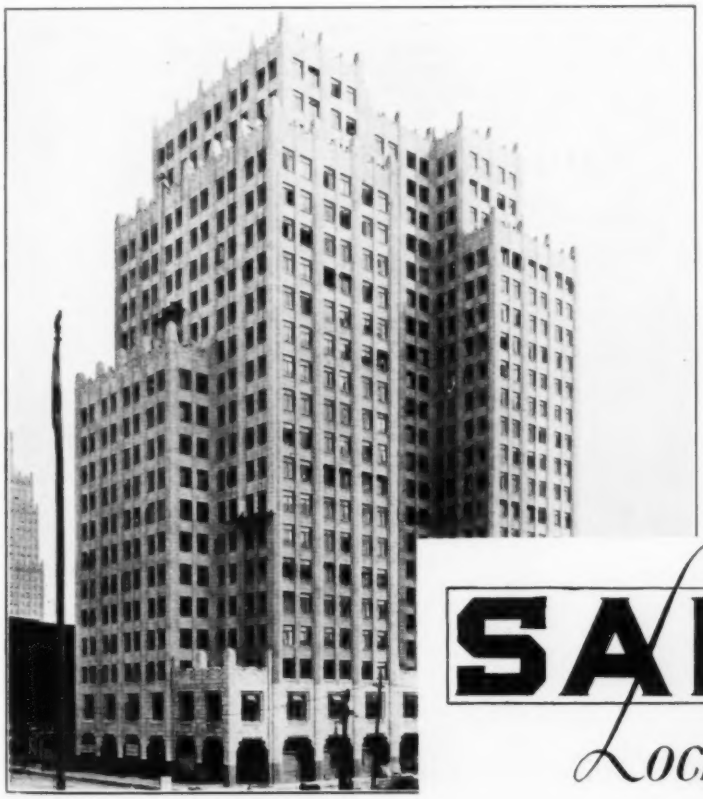
Cabinets—Kitchen
Coppes Bros. & Zook
Janes & Kirtland

Northeast from Saint Louis Memorial Plaza

Sargent Hardware has been wisely chosen for the new Missouri Pacific Building in St. Louis

"THE great city in the Mississippi Valley where big things, architecturally, are done in a big way." So "The Architect" commences an editorial on the plans of the Memorial Plaza which have been definitely got under way in St. Louis. And in accompanying sketches of the Plaza, the tall Missouri Pacific Building is an integral part of the background.

The Missouri Pacific Building is an excellent rendering of the modern skyscraper. Towering like a slim spruce tree toward the sky, yet having solidity and staunchness and that air of standing squarely on bed-rock, it is a worthy addition to the architecture of the city. E. M. Tucker, the architect, and Mauran, Russell and Crowell, the associate architects, are to be commended upon the beauty and the fineness of the project.



To be a part of its beauty and to care for its thousands of daily users efficiently and steadily, Sargent Hardware was wisely chosen. It is hardware that will last as long as the building stands, and operate consistently, noiselessly and certainly. For decades it will give satisfaction and security, at a very minimum of cost. Sargent Hardware of solid bronze or solid brass, with all moving parts exactly machined and fitted, is impervious to time or wear.

Sargent & Company, New Haven, Connecticut; New York, 94 Centre Street; Chicago, 150 North Wacker Drive (at Randolph).

SARGENT

Locks & Hardware

IMPERIAL MOTORS
Give *Real* Service

Squirrel Cage Motor

MANUFACTURERS of Motor driven equipment who buy hundreds of Motors for resale with their own product are perhaps the most discriminating buyers. Isn't it significant therefore, that the biggest percentage of our Motors go to these manufacturers? In other words, we're Specialists for other Specialists. Their customers are scattered all over the country—so real Service is a big item with them. They have found Imperial able and willing to meet their strictest specifications.

¶ You, too, will soon learn that our 36 years' experience will make it profitable and pleasant to do business with us.

THE IMPERIAL ELECTRIC CO.

Factory and General Office, Akron, Ohio

Branches in Principal Cities

Corkboard
Armstrong Cork & Insulation Co.

Covering—Pipe and Boiler
Armstrong Cork & Insulation Co.
Johns-Manville Corporation
Ric-wiL Company

Dishwashers
Colt's Patent Fire Arms Mfg. Co.

Door Closers
Corbin, P. & F.
Norton Door Closer Co.
Sargent & Company

Door and Window Frames
Andersen Lumber Co.

Doors
Bayley, William, Company
Cornell Iron Works, Inc.
Detroit Steel Products Co.
Genfire Steel Company
Hamlin, Irving
International Casement Co.
Hyde-Murphy Co.
Peelle Company, The
Sanymetal Products Co.
Security Fire Door Co.
Thorp Fire Proof Door Company
United Metal Products Co.
Wilson, J. G., Corp.

Drawing Inks
Higgins, Chas. M., & Co.

Dumbwaiters
Matot, D. A., Co.
Sedgwick Machine Works

Electric Refrigerators
General Electric Co.

Electric Switches
Hart & Hegeman Mfg. Co.

Electrical Equipment
Adam, Frank, Electric Co.
Edison Electric Appliance Co., Inc.
General Electric Company
Guth, Edwin F., Co.
Hart & Hegeman Mfg. Co.
Hazard Insulated Wire Works
Holtzer-Cabot Electric Co.
Imperial Electric Co.

Elevator Doors
Peelle Company, The
Security Fire Door Co.
United Metal Products Co.

Elevator Inclosures
United Metal Products Co.

Elevators—Matot, D. A., Co.
Otis Elevator Company
Sedgwick Machine Works

Enamels—Arco Company
Du Pont, E. I., de Nemours & Co., Inc.
Pratt & Lambert, Inc.

Engineers—Inspection
Hunt, Robert W., Company

Expanded Metal
Consolidated Expanded Metal Cos.
Genfire Steel Company
Kalman Steel Company
Truscon Steel Company

Exposition
Architectural & Allied Arts Exposition

Fence Post—Steel
American Steel & Wire Co.

Fence—Woven Wood
Reeves, Robert C., Co.

Fences
American Steel & Wire Co.
Cyclone Fence Co.
Fiske, J. W., Iron Works

Finishing Lime
Ohio Hydrate & Supply Co.

Fire Exit Devices
Vonnegut Hardware Company

The Connecticut Mutual Life Insurance Building at Hartford, Conn.
Benjamin Wistar Morris, Architect

MANY OF THE FINEST BUILDINGS in America—including the distinguished example shown above—owe no small part of their striking appearance to an O'BRIEN BROS. Slate roof. In this case the roof is composed of our Unfading Mottled Green and Purple, and our Emerald Dark Unfading Green. A touch of homogeneity is added by the use of O'BRIEN BROS. Slate for the slate flagging shown in the foreground.

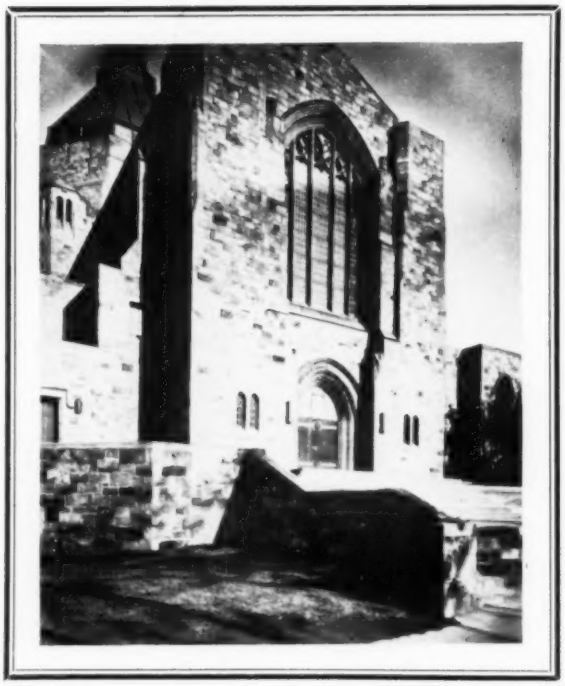
See Sweet's for details—page A458

O'BRIEN BROTHERS SLATE CO., INC.

Office *and* Quarries
Granville, New York

Architects Service Dept.
101 Park Ave., New York City

THE massive splendor of the Epworth-Euclid M. E. Church at Cleveland, Ohio—(Goodhue Associates, architects)—is no better illustrated than in the West Front where Old and New Testament figures flank the portals of RACKLE ARTSTONE. This church, a million dollar undertaking, towering above the city and lake, demonstrates the part which RACKLE ARTSTONE may play in lending an especial contrasting beauty of vividness to the more sombrely impressive forms of architecture.



Our catalogue is in Sweet's—pages A327-329

THE GEORGE RACKLE & SONS COMPANY
CLEVELAND, OHIO
Established 1870

RACKLE ARTSTONE

Fireproof Doors, Shutters and Windows
Cornell Iron Works, Inc.
Detroit Steel Products Co.
Peelle Company, The
Richmond Fireproof Door Co.
Thorp Fire Proof Door Company
Truscon Steel Company
United Metal Products Co.

Fireproofing
See "Concrete Construction," "Covering, Pipe and Boiler," "Fireproof Doors, Shutters and Windows," "Lath-Metal," Tile.

Floor Clips
Blasteel Mfg. Co.
Kalman Steel Company.

Floor Covering
Bird & Son, Inc.
Blabon, George W., Company
Bonded Floors Co.
Sloane, W. & J., Mfg. Co.
United States Rubber Co.
Wright Rubber Products Co.

Floor Hardeners
Master Builders Co.
Sonneborn, L., Sons, Incorporated
Truscon Laboratories

Floor Plate Steel—Carnegie Steel Co.

Floor Plates—Wood, Alan, Iron & Steel Co.

Flooring
Arkansas Oak Flooring Co.
Armstrong Cork Co. (Flooring Division)
Bonded Floors Company
Bruce, E. L., Co.
Cellized Oak Flooring, Inc.
Master Builders Co.
Moulding, Thomas, Floor Co.
Norton Company
Oak Flooring Bureau
Structural Gypsum Corp.
United States Gypsum Co.
United States Rubber Co.
Wright Rubber Products Co.
Zenitherm Company, Inc.

Flooring—Composition
Bonded Floors Co.
Zenitherm Company, Inc.

Flooring—Engineers and Contractors
Bonded Floors Co.

Floors—Fireproof
Structural Gypsum Corp.
U. S. Gypsum Co.

Fountains—Drinking
Rundle-Spence Mfg. Co.
Taylor, Halsey W.

Frame Bar—Consolidated Expanded Metal Cos.

Furniture
American Seating Co.
Clemetsen Co.

Garage Engineers—Ramp Buildings Corp.

Garage Hardware
Corbin, P. & F.

Garden Furniture and Ornaments
Hartmann-Sanders Company

Gas Boilers
American Gas Products Co.
American Radiator Co.
Bryant Heater & Mfg. Co.

Gas Ranges—American Stove Company

Glass—American Window Glass Co.

Glass, Plate
Pittsburgh Plate Glass Co.

Glass, Stained
See Stained Glass

Glass, Window
American Window Glass Co.

Granite
National Bldg. Granite Quarries Assn.
Rock of Ages
Rockport Granite Co.
Sullivan Granite Co.
Woodbury Granite Co., Inc.

Greenhouses
King Construction Co.
Lord & Burnham Co.

Floor Satisfaction Assured with MASTER MASTIC TMB FLOORING

The record made by TMB in hundreds of schools, hospitals and offices over a period of years definitely establishes its satisfactory service.

A soft, velvety, rubber-like, seamless surface—cleanliness—great durability—ease of repair—pleasing color—these are the outstanding characteristics of TMB.

Both first cost and maintenance cost are considerably lower than other types of approved materials.

TMB is manufactured and installed by one of the oldest and strongest companies in the flooring field.

Above—
Administration Building, St. Olaf College, Northfield, Minn. Coolidge & Hodgdon, Architects. 20,000 sq. ft. of TMB used.

Left—
Presbyterian Hospital, Denver, Colorado. 8,000 sq. ft. of TMB—W. E. and A. A. Fisher, Architects.

THOS. MOULDING FLOOR CO.

(Flooring Division—Thos. Moulding Brick Co.)

165 W. Wacker Drive, Chicago
General Offices and Display Room

Grand Central Terminal Bldg., New York

Chamber of Commerce Bldg., Pittsburg

OAK FLOORS
GIVE STURDY SINCERITY
to this Early American hall and stair

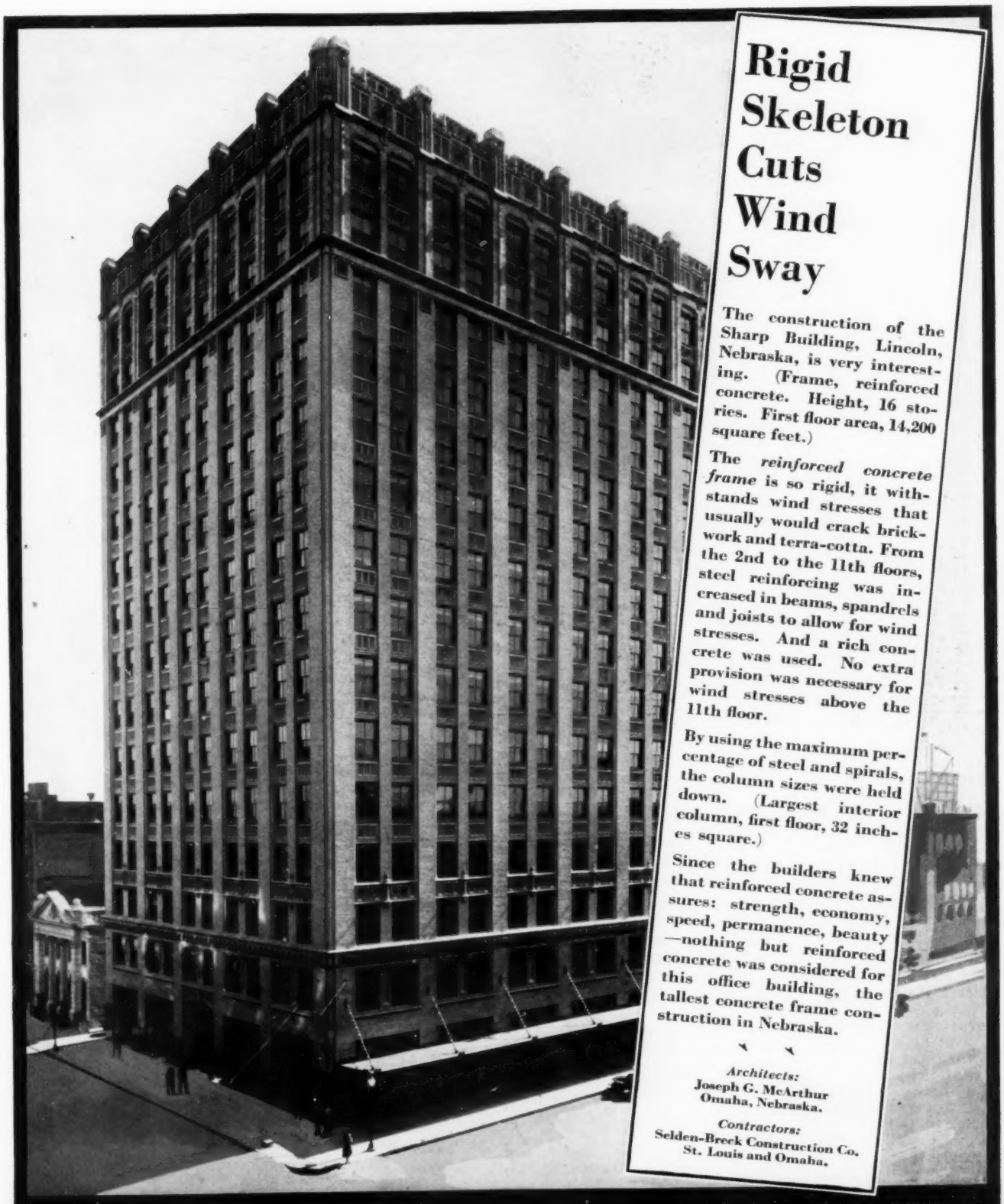
THE rugged beauty of the oak floor is here used attractively in a simple but excellent interior. Oak combines naturally and harmoniously with every architectural style. It is long-lasting. Its smooth, polished surface grows warmer and mellower year by year.

A wonderful variety of treatment in finish, color and design is afforded by modern oak floors. They add definitely to the distinction and the value of any house in which they are installed. And yet a building budget that includes oak floors throughout is very little higher than one that specifies the cheaper and less permanent of flooring materials.

We will gladly send you examples of some of the more unusual oak floors that have recently been laid — together with literature if you desire. OAK FLOORING BUREAU, 1239 Builders' Building, Chicago.

Oak flooring advertising will be carried on during 1928-29 on an increased scale. Look for the advertisements in "House and Garden," "House Beautiful," "Good Housekeeping," "Better Homes and Gardens" and "The Literary Digest."

Gypsum Plaster—See Plaster, Gypsum
Gypsum Slabs
Structural Gypsum Corp.
Hanger—Metal Lath for Concrete
Tie-To Insert Co.
Hardware
Corbin, P. & F.
McKinney Mfg. Co.
Rixson, Oscar C., Company
Sargent & Company
Soss Manufacturing Company
Stanley Works
Vonnegut Hardware Company
Heat Insulation
Johns-Manville Corporation
Ric-Wil Company
Heat Regulator Oven—American Stove Company
Heating Apparatus
Aerofin Corporation
American Gas Products Corp.
American Radiator Company
Bryant Heater & Mfg. Co.
Domestic Stoker Co.
Dunham, C. A., Company
Excelso Products Corp.
Hardinge Brothers, Inc.
Hess Warming & Ventilating Co.
Modine Mfg. Co.
Nash Engineering Company
National Radiator Corp.
Nelson, Herman, Corp.
Smith, H. B., Company
Trane Company
Hinges
McKinney Mfg. Co.
Hinges—Gravity
Sanymetal Products Co.
Hinges—Invisible
Soss Manufacturing Company
Hoists—Ashes, Etc.
Sedgwick Machine Works
Incinerators
Home Incinerator Co.
Kerner Incinerator Co.
Mid-West Incinerator Corp.
Inserts—Tie-To Insert Co.
Insulation
Armstrong Cork & Insulation Co.
Flax-li-num Insulating Co.
MacAndrews & Forbes Co.
U. S. Mineral Wool Co.
Interior Communication System
Automatic Electric Service Co.
Holtzer-Cabot Electric Co.
Time Systems Company
Iron—See Metal, Brass, Bronze, Copper, Iron, Zinc
Kitchen Cabinets—See Cabinets, Kitchen
Kitchen Equipment—See Cooking Equipment
Lath—Metal
American Steel & Wire Co.
Bostwick Steel Lath Co.
Genfire Steel Co.
Kalman Steel Company
Truscon Steel Company
Lawn Sprinkling System
Thompson Mfg. Co.
Lighting Control—Theatre
Adam Frank Electric Co.
Lighting Equipment
Cassidy Company
Duplex-A-Lite Division of the Miller Co.
Franklin Pottery
Guth, Edwin F., Company
Major Equiptment Co.
Pearlman, Victor S., & Co.
Smyser-Royer Company
Lime—Ohio Hydrate & Supply Co.
Limestone—Indiana Limestone Company
Linoleum
Armstrong Cork Company, Custom Floors Dept.
Blabon, George W., Company
Bonded Floors Co.
Sloane, W. & J.
Locks—Corbin, P. & F.
Sargent & Company
Mail Chutes—Cutler Mail Chute Co.



Rigid Skeleton Cuts Wind Sway

The construction of the Sharp Building, Lincoln, Nebraska, is very interesting. (Frame, reinforced concrete. Height, 16 stories. First floor area, 14,200 square feet.)

The *reinforced concrete frame* is so rigid, it withstands wind stresses that usually would crack brickwork and terra-cotta. From the 2nd to the 11th floors, steel reinforcing was increased in beams, spandrels and joists to allow for wind stresses. And a rich concrete was used. No extra provision was necessary for wind stresses above the 11th floor.

By using the maximum percentage of steel and spirals, the column sizes were held down. (Largest interior column, first floor, 32 inches square.)

Since the builders knew that reinforced concrete assures: strength, economy, speed, permanence, beauty —nothing but reinforced concrete was considered for this office building, the tallest concrete frame construction in Nebraska.

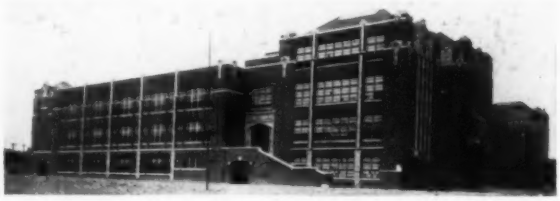
Architects:
Joseph G. McArthur
Omaha, Nebraska.

Contractors:
Selden-Breck Construction Co.
St. Louis and Omaha.

REINFORCED CONCRETE

Concrete Reinforcing Steel Institute
Tribune Tower
Chicago

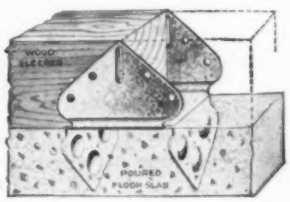
Rail Steel Bar Association
Builders Building
Chicago



Senior High School, Fort Worth, Texas. W. G. Clarkson & Company, Architects; Harry B. Friedman, Contractor

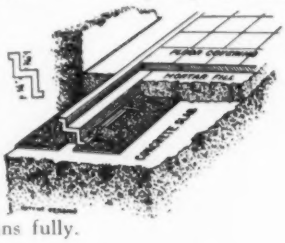
35,000 SPEARPOINT FLOOR CLIPS

securely anchor the wood floors to concrete slabs. Spearpoints give the strongest anchorage, save 6c per sq. ft., in construction cost, reduce dead weight 18 lbs. per sq. ft., with the resultant reduction in reinforcing. The generous width of Spearpoints allows sleepers to be joined within the clip, leaving no unanchored sleeper ends. Write for Circular "A" describing Standard and Giant Spearpoints.



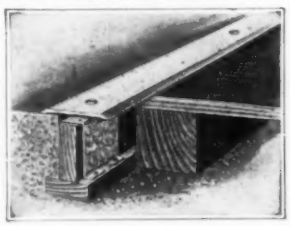
RECESSED BRASS BINDING BAR

Linoleum or rubber tile floors are most practically installed with concrete or terrazzo borders extending slightly from walls, using the Recessed Brass Binding Bar to form the recess. Bar serves as screed for both inside and outside fills, gives a straight binding edge for covering with an offset of uniform depth. Makes perfectly level, sanitary joint and adds beauty to floors. Circular "C" explains fully.



ANKORTITE FLOOR JOINERS

eliminate forever the loose, rattling threshold plate. The Anchor assembly not only gives secure anchorage but within it is provided a tightening space which permits adjustment of the threshold plate to take up the looseness that occurs as floors shrink or wear. Thousands of installations have been made under the direction of the ablest architects. The Ankortite is simple to install, attractive and inexpensive. Detailed description in Circular "F".



AGENTS IN PRINCIPAL CITIES

BLASTEEL MANUFACTURING CO.

Manufacturers also of Stair Nosings and Linoleum Bindings, Desk Edgings, Kick Plates, Push and Pull Plates

GENERAL OFFICE KANSAS CITY MISSOURI

Mantels—Artificial Stone
Jackson, Wm. H., Co.
Jacobson Mantel & Ornament Co.

Mantels—Wood
Georgian Mantel Co.

Marble
Georgia Marble Company
Vermont Marble Co.

Memorials—Church
American Seating Company

Metal Corner Bead
Genfire Steel Co.
Kalman Steel Company
Truscon Steel Company

Metal Work—Lead Sealed
Superior Sheet Steel Co.

Mineral Wool
U. S. Mineral Wool Co.

Mirrors—Lavatory
Hess Warming & Ventilating Co.

Mortar
Carney Company, The
Kosmos Portland Cement Co.
Louisville Cement Co.

Mortar Stain
Pecora Paint Co.

Nurseries
Andorra Nurseries

Oil Burners
Hardinge Brothers, Inc.

Ornamental Metal Workers
Fiske, J. W., Iron Works
Hughes-Keenan Co.
Smyser-Royer Company

Paints
Arco Company
Berry Brothers
Du Pont, E. I. de Nemours & Co., Inc.
Pittsburgh Plate Glass Co.
Pratt & Lambert, Inc.
U. S. Gutta Percha Paint Co.
United States Gypsum Co.

Panelboards
Adam, Frank, Electric Co.
General Electric Co.

Panel Guards
Consolidated Expanded Metal Cos.

Paper Bags
Bates Valve Bag Corp.

Partitions
Hamlin, Irving
Hauserman, E. F., Company
Sanymetal Products Co.
U. S. Gypsum Co.
Wilson, J. G., Corp.

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American Lead Pencil Company

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Hartmann Sanders Company

Piling—Concrete
MacArthur Concrete Pile Corp.
Raymond Concrete Pile Co.

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Carnegie Steel Co.

Pipe
National Tube Company
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Plate Glass
American Window Glass Co.
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Sec. B, Page 1749

Plumbing Fixtures
Abingdon Sanitary Mfg. Co.
American Pin Co.
Brunswick-Balke-Collender Co.
Church, C. F., Mfg. Co.
Curtin, A. F., Valve Co.
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Radiators
American Radiator Co.
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Smith, H. B., Company, The
United States Radiator Corp.

Railings
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Refrigeration
National Assoc. of Ice Industries

Refrigerators
General Electric Co.
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Roof Insulator
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Mahon, R. C., Company

Roofing
American Sheet & Tin Plate Co.
Bird & Son, Inc.
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Wheeling Corrugating Co.

Roofing Slates
Knickerbocker Slate Corp.
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Roofing—Tin
American Sheet & Tin Plate Co.
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Lamella Roof Syndicate, Inc.

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Detroit Steel Products Co.
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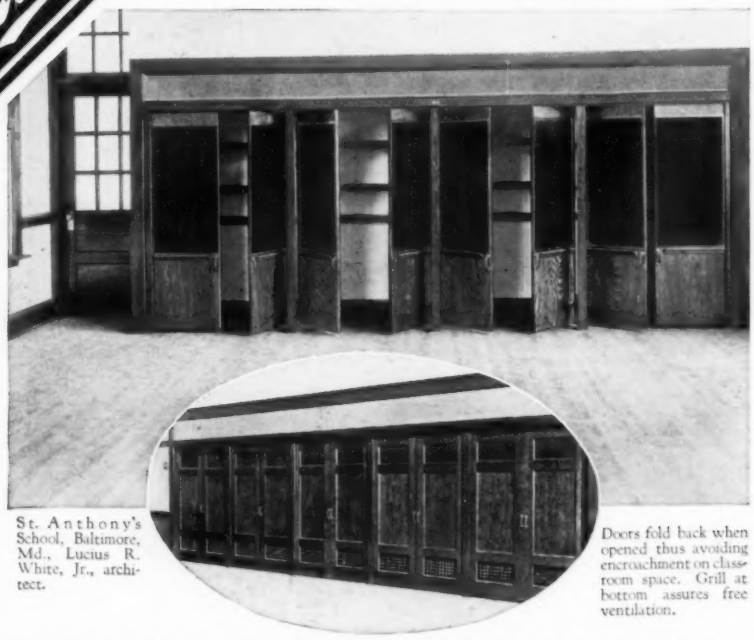

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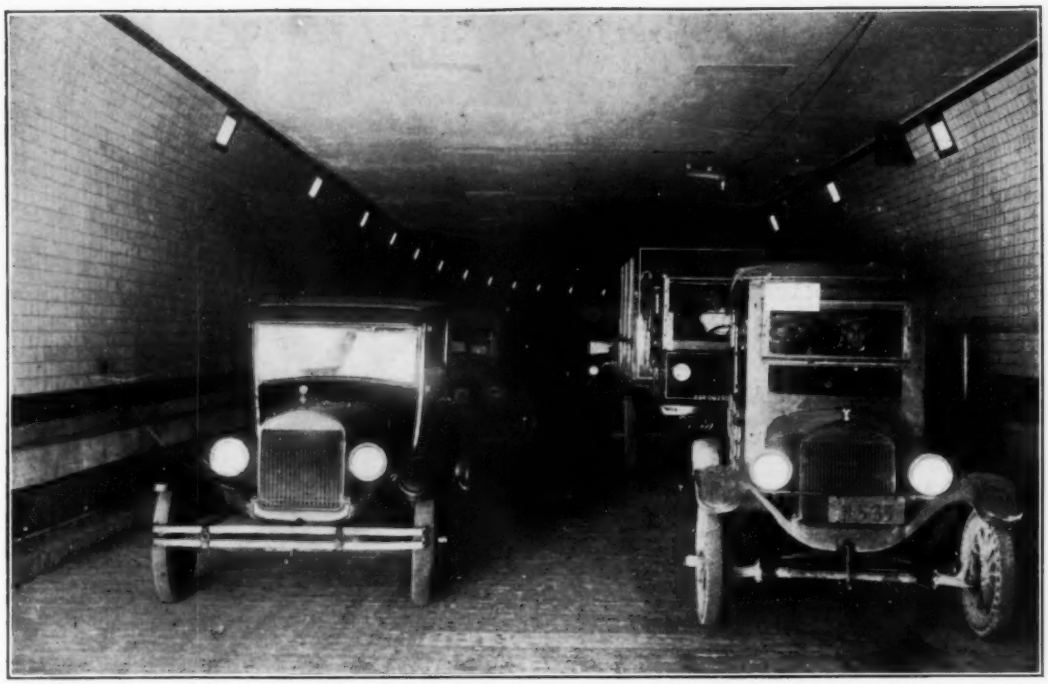

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INDEX TO ADVERTISEMENTS

Classified Directory of Advertisers, Pages 138-154 Inclusive

Catalogues of concerns marked (S) will be found in the 22nd Edition of Sweet's Architectural Catalogue.

Abingdon Sanitary Mfg. Co. 132
(S) Adam, Frank, Electric Co. 89
Aerofin Corporation 8–9
American Bridge Company 85
(S) American Gas Products Corp. 104
(S) American Pin Co. 62
Division Scovill Mfg. Co.
(S) American Radiator Co. 104, 137
(S) American Sheet & Tin Plate Co. 90
(S) American Steel & Wire Co. 118
(S) American Stove Co. 119
American Walnut Mfrs. Assoc. 5
(S) Andersen Lumber Co. 123
Andorra Nurseries, Inc. 102
Architects' Announcements 65
Architectural Decorating Co. 18
Architectural Record 117
Architectural Tile Co. 108
(S) Areo Company, The 22
Arkansas Oak Flooring Co. 76
(S) Armstrong Cork & Insulation Co. 21
(S) Armstrong Cork Co. 139
Custom Floors Dept.
(S) Associated Tile Manufacturers 71
(S) Athey Company 110
(S) Automatic Electric, Inc. 28

(S) Batchelder-Wilson Co. 34
Bates Valve Bag Corp. 48
(S) Bayley, William, Company 95
(S) Bird & Son, Inc. 154
(S) Blabon, Geo. W., Company 149
(S) Blasteel Mfg. Co. 148
(S) Blaw-Knox Co. 60
(S) Bonded Floors Co. 68
(S) Brasscrafters 19
(S) Briar Hill Stone Co. 80
(S) Brunswick-Balke-Collender Co. 103
Bryant Heater & Mfg. Co. 17
Burroughs Adding Machine Co. 61

(S) Cabot, Samuel, Inc. 97
Caproni, P. P., & Bro., Inc. 112
Caragol, Manuel, & Son, Inc. 120
Carnegie Steel Co. 26
(S) Carney Company 116
(S) Central Alloy Steel Corp. 49
(S) Church, C. F., Mfg. Co. 121
Christmas Seals 72
(S) Clay Products Association 92
Clementsen Co. 66
Coatesville Boiler Works 74
(S) Colt's Patent Fire Arms Mfg. Co. 112
(S) Concealed Bed Corp. 96
Concrete Reinforcing Steel Institute. 147
(S) Consolidated Expanded Metal Cos. 101
Construction Statistics 128
(S) Coppes Bros. & Zook 118
(S) Corbin, P. & F. 69
(S) Cornell Iron Works, Inc. 104
(S) Craftex Company 72
(S) Curtin, A. F., Valve Co. 118
(S) Cutler Mail Chute Co. 104
(S) Cyclone Fence Co. 39

(S) Dahlquist Mfg. Co. 70
Decorators Supply Co. 18
Detroit Decorative Supply Co. 18
(S) Detroit Steel Products Co. 153
Dickey, W. S., Clay Mfg. Co. 106
Domestic Stoker Co. 54
(S) Dunham, C. A., Co. 151
Duplex-A-Lite Division of the Miller Co. 33

(S) Edison Electric Appliance Co. 4
(S) Eustis, J. P., Mfg. Co. 19
(S) Evans, W. L. 82
(S) Excelso Products Corporation 140

Federal Seaboard Terra Cotta Corp. . 133
Fischer & Jirouch Co. 18
(S) Flax-li-num Insulating Co. 93
(S) Franklin Pottery (Inc.) 76

(S) General Electric Co. 53
(S) Genfire Steel Company 114
Graphic Review 99
(S) Guth, Edwin F. 120

(S) Hamlin, Irving 102
(S) Hart & Hegeman Mfg. Co. 32
(S) Hartmann-Sanders 45
(S) Hauserman, E. F., Co. 37
Hazard Insulated Wire Works. 90
Helburn, William, Inc. 116
(S) Hess Warming & Ventilating Co. 120
(S) Higgin Manufacturing Co. 114
Higgins, Chas. M., & Co. 78
(S) Hoffmann & Billings Mfg. Co. 100
Holmes & Edwards Silver Co. 24–25
(S) Holtzer-Cabot Elec. Co. 80
(S) Hood, B. Mifflin, Co. 111
(S) Hughes-Keenan Co. 98
(S) Hunt, Robert W., Company 82
(S) Hyde-Murphy Co. 114

Imperial Electric Company 142
(S) Indiana Limestone Company 3
(S) International Casement Co., Inc. 46

(S) Jackson, Wm. H., Co. 57
(S) Jacobson & Company 18
James Lumber Co. 104
Jewett Refrigerator Co. 16
Johns-Manville Corporation 42, 107

K. M. Supply Co. 88
(S) Kawneer Company 97, 158
(S) Kerner Incinerator Co. 84
(S) King Construction Co. 70
(S) Knickerbocker Slate Corp. 106
(S) Knight, Maurice A. 135
Kohler Co. 75

(S) Lamella Roof Syndicate, Inc. 108
(S) Leonard Rooke Co. 108
(S) Lincoln Electric Co. 77
Lord, Chas. E. 110
(S) Lord & Burnham Co. 20
(S) Louisville Cement Co. 131
(S) Lupton's, David, Sons Co. 50

(S) MacArthur Concrete Pile Corp. 98
Maddock's, Thomas, Sons Co. 125
(S) Mahon, R. C., Company 83, 100
Major Equipment Co. 134
(S) Master Builders Co. 6
(S) Matot, D. A., Co. 98
(S) McCray Refrigerator Sales Corp. 127
(S) Mid-West Incinerator Corp. 120
(S) Modine Mfg. Co. 100
(S) Morton Manufacturing Co. 112
(S) Moulding Floor Co., Thos. 145

(S) Nash Engineering Co. 64
National Asbest-O-Phalt Corp. 94
(S) National Bldg. Granite Quarries Assoc. 63
(S) National Fireproofing Co. 29
(S) National Radiator Corp. 79
(S) National Terra Cotta Society 73
National Tube Co. 40
News of the Field 126
(S) Northwestern Terra Cotta Co. 43
(S) Norton Company 44
(S) Norton Door Closer Co. 74
Notes in Brief 122-124

(S) Oak Flooring Bureau 146
(S) O'Brien Bros. Slate Co. 143
(S) Ohio Hydrate & Supply Co. 32

Pearlman, Victor S., & Co. 130
(S) Pecora Paint Co. 150
(S) Peelle Company, The 81
(S) Penberthy Injector Co. 30
(S) Pratt & Lambert, Inc. 31

(S) Rackle, Geo. & Sons Co., The 144
Rail Steel Bar Assoc. 147
(S) Ramp Buildings Corp. 11
(S) Raymond Concrete Pile Co. 7
(S) Receivador Sales Co. 106
(S) Reeves, Robert C., Co. 118
(S) Ric-wiL Co. 110
(S) Rising & Nelson Slate Co. 51
Rixson, Oscar C., Company 136
Rock of Ages 102
(S) Rolscreen Company 13
(S) Rome Brass Radiator Corp. 56
Rundle-Spence Mfg. Co. 78

(S) Samson Cordage Works 108
(S) Sandusky Cement Co. ..... 3rd Cover
(S) Sanymetal Products Co. 12
Sargent & Co. 141
(S) Security Fire Door Co. 157
(S) Sedgwick Machine Works 98
(S) Sheldon, F. C., Slate Co. 47
Shevlin, Carpenter & Clarke Co. 58–59
(S) Silver Lake Co. 116
(S) Sisalkraft Co. 102
(S) Solvay Sales Corp. 92
(S) Sonneborn, L., Sons, Inc. 155
(S) Soss Mfg. Co. 114
Southern Cypress Mfrs. Assoc. 10
(S) Stanley Works, The 15
Stone & Webster, Inc. 38
(S) Structural Gypsum Corp. 41
Sullivan Granite Co. 112
(S) Superior Sheet Steel Co. 105
Sweet's Architectural Catalogue 86–87

(S) Taylor, Halsey W., Co. 35
(S) Taylor, N. & G., Company 110
(S) Thorp Fire Proof Door Co. 53
"Tie-To" Insert Co. 94
(S) Time Systems Co. 100
(S) Trane Co., The 96
Trenton Potteries Company 91
(S) Truscon Laboratories 2
(S) Truscon Steel Co. ..... 2nd Cover

(S) United Metal Products Co. 88
(S) U. S. Gutta Percha Paint Co. 67
(S) U. S. Gypsum Co. 129
(S) U. S. Mineral Wool Co. 116

(S) Vermont Marble Co. 23
Voigt Company 18
(S) Vonnegut Hardware Co. 109

(S) Weatherbest Stained Shingle Co. 138
(S) Western Pine Mfrs. Assoc. 84
(S) Wheeling Corrugating Co. 115
(S) Wiggins, H. B., Sons Co. 113
(S) Williams Pivot Sash Co. 36
(S) Wilson, J. G., Corp. 152
(S) Wood, Alan, Iron & Steel Co. 106
(S) Woodbury Granite Co. ..... 4th Cover
(S) Wright Rubber Prod. Co. 27

(S) Zenitherm Company, Inc. 14

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